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[The medical doctrines of Broussais have of late attracted considerable attention in Europe, and a great deal has been published, both in explanation and refutation of them. That our readers may have an opportunity of examining these doctrines for themselves, we publish the following translation of a condensed account of them, drawn up by the author himself, and published as an introduction to his *Examen des Doctrines Medicales*. We intend, in a future number of this journal, to enter into a critical examination of these doctrines. The Propositions containing the THERAPEUTICS, will be published in the next number.]—EDITORS.

ART. I. *Propositions in Medicine; prefixed to the new Edition of the "Examen des Doctrines Medicales," &c. by J. F. V. BROUSSAIS. Translated by DUDLEY ATKINS, M. D.*

SECT. I. *Physiology.*

1. ANIMAL life is supported only by external stimulants, (Brown); and every thing is a stimulant which augments the vital phenomena.

2. Caloric is the first and most important stimulant; and if it ceases to excite the system, all other stimulants lose their power over it.

3. Caloric is necessarily and constantly supplied to the

embryo by its mother, and to the animal, when born, by the lungs ; but it penetrates accidentally by all inlets.

4. If the system is deprived of caloric for a certain time, all its preservative, reparative and sanative phenomena cease.

5. Caloric excites the power which forms the organs. This power forms the organs from alimentary matters, and preserves the fluids in their interstices : the organs or solids, as well as the fluids, are called animal matter.

6. The composition of the organs and fluids, is a kind of chemistry peculiar to the living system. The power, which produces this chemical action, when composing the organs, gives them the power of feeling, and of moving by contractions. Sensibility and contractility are then the evidences or proofs of a living state.

7. There are substances in nature, besides caloric, which augment the sensibility and contractility of parts of the system, with which they are placed in contact. This is stimulation or irritation ; and these substances are stimulants.

8. When sensibility and contractility are augmented in any one point, they soon become so in many others ; this is sympathy.

9. Sympathy takes place by means of a particular form of the living tissue or animal matter, called nerves.

10. All the phenomena of association take place by means of the nerves, which transmit the stimulation from one part to one or several others ; these then are sympathies.

11. The object of the original and of the sympathetic stimulation is always nutrition, the removal of destructive agents, or reproduction ; and the operations which produce these effects are called functions. Now, in order to the exercise of functions, the fluids must concur with the solids : in all stimulation there is then an afflux or attraction of fluids.

12. Sensibility and contractility are distributed in various degrees to the different tissues composing the living system. Those which possess them in the highest degree, are the

immediate subjects of the action of stimulants, and transmit it to the others ; they are then the natural agents or first movers of nervous sympathies, (mobiles.)

13. The tissues, which may be considered as the natural first movers of sympathies, are those in which the nervous substance is found of a pulpy appearance, intermixed with capillary blood-vessels, and with other vessels which contain buminous or gelatinous fluids : these are, the skin ; the senses of the head, called the external senses ; and the mucous membranes, which are the internal senses.

14. All the organs of the senses are exposed by nature to the action of external agents, and to others which are internal ; and the stimulation they receive from them, is transmitted to the brain, their common centre. Besides, from these different points stimulation is transmitted to the other tissues ; and thus the functions are continued.

15. Every stimulation capable of producing a perception in the brain, passes through the whole nervous system of relation. It then passes to be repeated in the mucous membranes, whence it is again returned to the centre of perception, which judges it, according to the impression received from the viscus to which the mucous membrane belongs, and which acts according to the pleasure or pain it perceives ; and this action has always for its object to continue or repeat the impression, or to remove the cause of it.

16. The action commanded by the cerebral centre of relation, is executed by means of the locomotive apparatus, which is subject to the control of the brain ; and the same nerves which have transmitted the impression, serve to execute the will of the centre of perception, by the portion of their tissue which communicates with the muscles of locomotion.

17. When an impression, or rather the stimulation which results from an impression, passes through the nervous apparatus of the viscera, it produces motions in the muscles which form part of them, modifies the circulation of all the

fluids passing through them, and even produces involuntary contractions in the muscles of locomotion.

18. When the stimulating influence of the brain is exercised, whether voluntarily or not, upon the muscles of locomotion, the stimulation is also involuntarily communicated to the muscular and vascular tissues of the viscera; because the nerves of relation are common to the muscles of locomotion and to the viscera.

19. The voluntary motions having brought the alimentary substances in contact with the organs of assimilation, they assimilate them to the individual.

20. Assimilation is a phenomenon of the first importance, which cannot be explained by the action of sensibility and contractility; it can be ascribed only to the creating power, and is one of the effects of vital chemistry.

21. Absorption depends, in the first place, upon the affinities of vital chemistry; in the second place, upon the exercise of sensibility and contractility.

22. The circulation is under the direction of sensibility and contractility in the heart and vessels, till they have decreased to a point, which is difficult to be determined: beyond this point, and at that where the extravasated fluids move among the fibres, they are moved partly by the heart, partly by the contractility which local sensibility produces, and partly by the affinities of vital chemistry, which are constantly directed by the creative power. The same is true of the causes of the motion of fluids in the organs called secretory.

23. While the fluids are moving in the substance of any part, the composition and decomposition of those parts, and the formation of the fluids, which are to remain in their interstices for a longer or shorter time, are effected. These three phenomena, which constitute nutrition, belong essentially to vital chemistry, because the action of sensibility and contractility in this case, are confined to presenting the assimilated substances to the organs, and to eliminating the

fluids, which are unnecessary to composition, or those which have been set free by decomposition.

24. While the fluids are moving in the tissue of glands, there are produced, besides nutrition, certain changes in the form of the fluids, which are not employed in this function, so that each gland furnishes a fluid of its own, with peculiar characters: these changes belong to vital chemistry. Sensibility, as well as contractility, serve only to eliminate the newly formed fluids, in order to conduct them to the exterior, if they are useless, or to deposit them upon mucous surfaces, if they are destined to concur in the performance of some function.

25. The production of the embryo is the work of vital chemistry: sensibility and contractility conduct the embryo to the uterus; vital chemistry develops it, and gives it its peculiar sensibility and contractility, (see sect. 6): the sensibility and contractility of the mother produce its expulsion.

26. There is an order of nerves situated along the vertebral column, of which ganglia peculiar to them are the centre; their union is called the great sympathetic; it is better to call them the *ganglionic nerves*.

27. The ganglionic nerves penetrate the viscera and the muscles, with their vessels and their nerves of relation; they enter the viscera and muscles of the trunk in large numbers, but there are few of them in the muscles of the extremities.

28. A wound of the ganglionic nerves does not originally produce either pain or convulsions; they neither transmit sensation to the brain, nor orders from the brain to the organs.

29. The ganglionic nerves preside over those internal motions only, which the cerebral centre does not direct. They are mingled with the capillary system of the viscera, and serve to regulate and transmit stimulation from one part to another, according to the necessities of the creating

power; that is, they are particularly subservient to vital chemistry.

30. The ganglionic nerves receive the stimulating influence of the cerebral nerves, and render it subservient to motions independent of the cerebral centre of perception. The will, therefore, cannot withdraw or withhold the stimulation, which it has transmitted to them by the exercise of the functions of relation.

31. The ganglionic nerves render the vital powers of the animal subservient to vital chemistry, independently of the influence of the will; and when the sum total of this power no longer suffices for the support of these two grand orders of functions, they abstract it from the functions of relation, in order to concentrate it upon the functions of nutrition. They produce this diversion by accumulating the vital forces, and with them the fluids, in the vessels of the viscera, and especially of the brain; which produces sleep.

32. When irritation predominates in the viscera, the ganglionic nerves transmit it to the apparatus of relation, by means of the cerebral nerves, with which they communicate in these viscera; and the will cannot prevent this communication of irritation, more than it can withdraw that which it has transmitted to the viscera.

33. The centre of relation, solicited by the influence of the viscera, excites, either with or without the concurrence of the will, either with or without the consciousness of the mind (*le moi*), motions in the apparatus of locomotion, which are in direct proportion to the visceral irritations, and of which the result is either the removal of these irritations, or the engorgement, the compression, or lastly, the disorganization of the brain.

34. Whenever a stimulation capable of affecting the cerebral nerves, is produced in the system, it is transmitted to the centre of relation, and this can execute motions in consequence of it, without the animal's being conscious of it, or its will participating in it. The phenomena then, which

give the idea of mind (*le moi*), are not continual, while the perception and reaction of the centre of relation are continual.

35. The perceptions of the cerebral centre, of which the mind is conscious, receive the name of sensibility, and the functions it directs are called voluntary. But the perceptions of the cerebral centre, of which the mind is not conscious, and the motions it produces without its participation, are not referred either to sensibility, or to the will; it is a particular kind of organic phenomena. The central nervous apparatus presents then two modes in its functions.

36. Whenever the mind has a perception, it perceives at the same time in the brain, and without it. (See 13.) Now the points external to the brain, where the mind may feel, are not only the external and internal senses, they are also the accidental seats of inflammation; for inflammation places the extremities of the nerves of relation, in most of the tissues, in a state almost analogous to that of the nervous extremities, forming part of the sensitive surfaces. These seats of inflammation then become accidental senses.

37. The mind can refuse to execute certain acts demanded of it by sensations the natural or accidental senses excite in it; but there are others, which it can only delay for a longer or shorter time.

38. The mind has not the power of retarding or preventing the execution of acts demanded by the sensations, except when the encephalic apparatus is advanced in its development, and in a waking and healthy state. This faculty does not exist then in infancy; afterwards it increases by the exercise of the understanding: in sleep, madness, and other morbid states of the body, it offers numerous varieties.

39. The actions which the mind can only retard, are solicited by sensations arising from the viscera essential to life, and which relate to the necessary exercise of their functions.

40. Among those actions which the mind may refuse to execute, some are solicited by the necessities of viscera essential to life, but then these necessities are not urgent:

if they become so, the mind obeys, reason is lost, or death follows. Others relate only to the exercises of the functions, which are not necessary to the preservation of life; but the refusal of the mind may, even in this case, produce madness.

41. When the animal suffers and dies, for having refused to satisfy the necessities of the viscera, it is the triumph of intelligence over instinct. But when reason is lost, from the resistance which the mind opposes to the necessities of the viscera, that is, from the irritation they have produced in the brain, it is the triumph of instinct over intellect.

42. Instinct consists of the sensations produced by the viscera, and which solicit the cerebral centre to cause the performance of those actions, which are necessary to the discharge of their functions.

43. The actions solicited by instinct, are often performed without the participation of the mind, and even during its absence. Examples of this are seen in the fœtus, the person asleep, &c. &c.

44. The actions solicited by instinct, predominate in the infant, and diminish as the intellect advances to perfection.

45. Intellect manifests its actual influence upon the organization, by the modifications it produces in the sensations caused, and in the actions solicited, by instinct.

46. The passions are sensations produced at first by instinct, but afterwards increased by the attention which the intellect pays to them, so as to become predominant, and to determine actions more or less remarkable, and always directed towards the satisfaction of the instinctive want, which gave them origin.

47. The passions are, like madness, the triumph of the viscera, and consequently of instinct, over the intellect, and they often produce madness.

48. Instinct and the intellectual faculties, are always mixed in the passions.

49. Instinct may be exercised either with or without the intellectual faculties.

50. The intellectual faculties have always an admixture of instinct.

51. The intellectual faculties may be exercised without passion, but never without a degree of pleasure or pain.

52. The pleasure and pain which accompany the action of the intellectual faculties, have the same seat with the pleasure and pain of the passions; because the centre of relation cannot perceive in the brain without perceiving in the viscera; and it is always in the last that its perceptions are strongest.

53. When the intellect is occupied with ideas relating to the wants of a viscus, or to the functions of a sense, the nerves of this viscus or sense are always in action, and transmit sensations to the centre of relation; it results from this, that the destruction of the nerves of any sense, brings on by degrees, the loss of the ideas obtained by means of it.

54. An acephalous fœtus may live; but it dies when it is born, because it wants the influence of respiration, which depends upon the brain.

55. Organs, whose communication with the brain is interrupted, soon lose their vitality and their nutrition, wither, and die. But this case is rare; for in paralyzes, the consequences of affections of the brain, there is still communication with this viscus; but as the chief communication takes place by a diseased point, and the others by anastomoses of small nervous filaments, its influences are incapable of preserving action to the requisite degree.

56. It is not from the want of a particular principle, of which the brain should be the source, that the paralysed organs of motion wither, but from the want of excitement and exercise.

57. The want of action in paralysed muscles, does not arise from the inaptitude of their nerves to excite motion, it arises from the want of a sufficient communication with the brain; but when nutrition has been languishing in a part which is paralysed, during a long time, its nerves deteriorate, and are no longer fit to excite action.

58. The access of oxygenated blood may keep up nutrition in paralysed parts, because there is still a little communication with the brain, but the want of exercise renders this nutrition more and more languishing, without, however, producing the death of the part.

59. A free and continual communication of excitement in all directions, and to all parts of the body, is indispensable for maintaining an equilibrium of the functions.

60. In hot seasons and climates, excitement is produced in animals more upon the external than the internal surface; in cold seasons and climates, the case is the reverse. The gastric surface becomes then the principal seat of excitement; this is the reason why nutrition is then more considerable.

61. Excitement is never uniform in the animal economy; it is always in excess in certain points, and is deficient in others, and predominates in different regions successively. This inequality often deranges, at last, the equilibrium of the functions.

62. The health never changes spontaneously, but always because the external stimulants destined to support the functions have accumulated the excitement in some particular part, or because they have ceased to affect the system, or because the system has been stimulated, in a manner repugnant to the exercises of the laws of life; for there are certain relations between external agents, and the whole, or different parts of the system, so that some are agreeable and others repugnant to the laws of vitality; and these last are poisons.

63. Some external modifying powers diminish the phenomena of life in the organs on which they operate, but the pain which is developed in the debilitated part, serves as an excitement, which recalls the vital phenomena, in a manner sometimes favourable, and sometimes unfavourable to the preservation of the animal.

64. The excess of hæmatisis or sanguification, augments the sum of vitality; but this progression has a limit, beyond

which the excitement is accumulated upon an organ, and disease results from the too great irritation of that organ.

65. Excitement is thus accumulated upon particular organs by the influence of exciting agents, although the whole sum of vitality may be much diminished; and this state may be prolonged till marasmus or death occur.

66. The system never supports excessive irritation with impunity; and all those who are the most habituated to powerful stimulants, are sooner or later affected with excess of local irritation.

SECT. II. Pathology.

67. Health supposes the regular exercise of the functions; disease results from their irregularity; death from their cessation.

68. The functions are irregular when one, or many of them, are exercised with too much or too little energy.

69. The energy of a function is excessive, when it accelerates, suspends, or renders unnatural the others, in such a manner that one, or several of the organs performing the function so changed, and of those which it has disturbed, are threatened with destruction.

70. The energy of a function languishes, when one or many of the organs, which are charged with it, do not enjoy the degree of vitality necessary to its proper performance.

71. The vitality of organs may have been increased, before having been diminished, and *vice versa*.

72. There cannot be a general and uniform increase or diminution of the vitality of organs.

73. The augmentation always commences in one organic system, and is communicated to others, either in the same apparatus, (*appareil*),* or in others.

* The word "*appareil*" is used to express a combination of different organic systems, for the performance of one function: As, the mucous membrane enters into the structure of the digestive apparatus, in combination with other organic systems.—TRANS.

74. The nature of the communicated augmentation is the same with that of the primitive one. It is always the increase of the phenomena, which proves the state of life.

75. The increased excitement of one or several organic systems, of one or several apparatus, always produces the langour of some other system or apparatus.

76. The diminution of vitality in one system or apparatus, *often* produces increased excitement in one or many others, and *sometimes* a diminution of action.

77. The increased vitality of one system, (and still more, of one apparatus,) supposes always an action of stimulants greater than that which belongs to the state of health, that is to say, a super-stimulation or super-excitation.

78. A partial excess of excitement, always supposes too great an afflux of fluids ; there is then a congestion injurious to the performance of the functions in every case of excessive or super-excitement. This is a morbid congestion.

79. The union of partial increased excitement and morbid congestion, always produces an increased or irregular partial nutrition ; which constitutes active congestion, necessarily tending to disorganization.

80. Active and partial increased excitement and morbid congestion, are compatible with a diminution of the general sum of vitality.

81. A partial diminution of vitality, always produces that of nutrition, although it often determines a morbid congestion ; but this is passive.

82. A passive morbid congestion may produce disorganization, but much less than active congestion.

83. Active morbid congestion being always the companion of excessive excitement or irritation, it suffices to name the last, that we may be understood in developing the progress of diseases : we may even, for brevity's sake, content ourselves with the word *irritation*, provided the same sense is attached to it as to the two preceding expressions ; but the epithet *morbid* must always be understood.

84. Irritation may exist in any one system, without the participation of any other; but this is the case, only when it is slight. Its effects are then confined to the local organic actions, and to the nutrition of the part; but as soon as the local irritation is increased to a certain degree, it is repeated in other systems or in other apparatus more or less remote, but always without changing its nature.

85. The nerves are the only agents of the transmission of irritation; which constitutes morbid sympathies. Morbid sympathies are then produced in the same manner as sympathies in a healthy state of the system; they differ from them only in this, that in the last case the nerves transmit more irritation, or a mode of excitement which is repugnant to the laws of life.

86. Morbid sympathies are of two kinds: the first are manifested by organic phenomena; viz. increased motions of the fibres, congestions, changes of secretions, exhalations, absorptions, which are then augmented, diminished, or rendered unnatural; by changes of temperature, or by defective nutrition; these are organic sympathies: the second, by pains, convulsions of the voluntary muscles, and mental aberrations; these are sympathies of relation.

87. Organic sympathies may exist without sympathies of relation; the last always produce the organic; but they most frequently occur simultaneously.

88. The greater the sensibility of the irritated organ, and of the individual, the more numerous are sympathies, and *vice versa*.

89. The more numerous and active the sympathies, the more violent is the disease.

90. Excess of the sympathies of relation suffices to produce death, which then appears to depend upon the disorganization of the centre of relation. The excess of organic sympathies may also lead rapidly to death, which arises from congestion and disorganization in several viscera.

91. The organ first irritated, is sometimes the only one

to suffer congestion or disorganization; the organs sympathetically affected, not experiencing sufficient irritation to partake in them.

92. The organs sympathetically irritated, may become so in a degree superior to that of the organ, by the influence of which they are affected. In this case the disease changes its seat and name; this is metastasis.

93. The organ which has become the seat of metastasis, then excites sympathies which are peculiar to itself; and these may, in their turn, become predominant: such are the phlegmasiæ which pass from one part to another, &c.

94. If the sympathetic irritation, which the principal viscera produce in the secreting and exhaling organs, and in the surface of the body, becomes stronger than that of the viscera, these last are freed from their irritation, and the disease is terminated by a prompt cure. These are crises. In this case the disease passes from the interior towards the exterior.

95. The congestions in crises, always terminate by some evacuation, either secretory, purulent, or hæmorrhagic; without which the crisis is not complete.

96. If the irritation advances from the exterior towards the interior, or from a less to a more important viscus, the disease is aggravated. These are the false crises of authors.

97. Irritations have no fixed duration or progress; these are determined by idiosyncrasy, and by the modifying agents which operate upon the patient.

98. Irritation has a tendency to propagate itself in similar tissues and organic systems; this constitutes diathesis: it however sometimes passes to tissues entirely different from those in which it has originated, and this occurs more frequently in acute than in chronic diseases.

99. When irritation accumulates the blood in a tissue with extraordinary tumour, redness and heat, which are sufficient to disorganize the part so irritated, it is called inflammation.

100. Local pain is not inseparable from inflammation, even when intense.

101. The local pain in inflammation offers many varieties, which are subordinate to the mode of sensibility of the part, and the degree of sensibility of the individual.

102. Inflammation often excites more pain in the parts, where sympathetic irritations occur, than in the proper seat of the disease. Inflammations of the mucous membranes of the stomach, of the small intestines, and of the bladder, offer daily instances of this.

103. When inflammation produces no pain, it excites only organic sympathies.

104. Inflammation always changes the fluids in the inflamed part.

105. Inflammation may exist without suppuration.

106. Inflammation often leaves as its result, a mode of irritation, which bears a different name from its own, and produces a cacochymy, which has been regarded as an essential disease.

107. Inflammation often excites sympathies of relation, which have become the predominant symptoms in the eyes of authors, and have given the disease the name of *neurosis*.

108. Inflammation does not change its nature from the diminution of the forces by which it is produced.

109. The irritations of all organs are transmitted to the brain, where they acquire a certain degree of intensity, and particularly when they are inflammatory; from this results an alteration of the intellectual and affective faculties, and a state of pain and uneasiness, which are referred to the apparatus of locomotion. The excess of this sympathy may change into encephalitis.

110. Intense irritations of all organs, are constantly transmitted to the stomach at the moment of their occurrence; from this results loss of appetite, change of colour of the tongue, and of the lingual mucus: if the irritation received by the stomach arises to the degree of inflammation, the symptoms of gastritis appear, and as the brain is always

more irritated, it develops in a higher degree the symptoms which are peculiar to it, and it may even become inflamed.

111. Intense irritations of all the organs are transmitted to the heart; the number of its contractions is increased, the circulation is accelerated, and the increased heat of the skin produces a painful sensation. This should be called *fever*, which is here considered in an abstract and general manner.

112. Fever is always the result of an original or sympathetic irritation of the heart.

113. Every irritation, sufficiently intense to produce fever, is one of the shades of inflammation.

114. Every inflammation sufficiently intense to produce fever by arriving at the heart, is enough so to be transmitted at the same time to the brain and stomach, at least in its commencement; and as it does not change its nature in being transmitted, it is always a degree of inflammation that it develops in these organs.

115. The irritations transmitted to the brain and stomach by an inflamed organ, sometimes diminish, notwithstanding the continuance of the inflammation which produced them; and these two viscera resume their functions, whilst the heart continues to be violently irritated, and to keep up the fever.

116. Although the stomach and brain continue their functions during the inflammation of another organ, they are still organically irritated. Their irritation is always near to inflammation, and often becomes such, if the cause which supports it continues till death.

117. If the irritation excited by sympathy in the stomach and brain, instead of diminishing, becomes more intense than that of the part upon whose irritation it depends, this is one of the cases indicated in the propositions upon metastasis. (See 102 et. seq.)

118. Inflammation of the brain *always* produces that of the digestive passages, and *sometimes* that of their appendages; this is an organic sympathy.

119. Inflammation of the brain is more frequently the sympathetic effect of inflammations of the stomach, than their cause.

120. The sanguine congestion of the stomach, in drunkenness, in typhus, and in fevers *mali moris*, is necessarily repeated in the brain and its membranes.

121. Inflammation of the brain excites nervous phenomena, which have often been considered as essential.

122. All the irritations of the brain, which are prolonged till death, terminate in inflammation or hæmorrhagy; such are epilepsy, catalepsy, violent agitations of the mind, &c.

123. Mania supposes always an irritation of the brain: this irritation may, for a long time, be kept up by another inflammation, and disappear with it; but if it is prolonged, it always terminates in a conversion to true encephalitis, either of the parenchyma or membranes.

124. No extra-cerebral inflammation can produce mania, without the attendance of that of the stomach and small intestines. And the liver, in these cases, is affected secondarily.

125. Arachnitis is more frequently consecutive to a gastro-enteritis than an original affection; but the delirium, watchfulness and convulsions, which are often the signs of it, may be kept up by this gastro-enteritis, disappear with it, or leave no traces after death, of inflammation in the arachnoid or pia mater, or at least less marked than those which are found in the stomach, &c.

126. An extreme suffering, whether from the inflammation of an organ, or from the irritation of the branch of a nerve, or from a moral cause, engorges the brain, and tends to produce an inflammation either of the cerebral substance, or of the pia mater or arachnoid membrane. Now, the suffering of the stomach is the most distressing, and all the others produce it. There cannot therefore be any degree of gastro-enteritis, without some cerebral irritation. All these remarks should be applied to cephalic hæmorrhages.

127. Tubercles, cancers, &c. of the brain, are the effects of chronic inflammation of this viscus.

128. All encephalic irritations may terminate in apoplexy.

129. The word apoplexy expresses the cessation of the phenomena of relation; we may distinguish two principal degrees, according to the existence or absence of partial paralysis; but we cannot divide this disease from a prediction of the forms of organic alteration of the brain.

130. Inflammation of the internal or mucous membrane of the stomach is called *gastritis*; but it is never ascertained by examination of the body, except when joined with that of the mucous membrane of the small intestines. It were therefore better to call it *gastro-enteritis*.

131. Inflammation of the mucous membrane of the small intestines, is called *enteritis*. Examination of the body after death, sometimes shows it to have existed alone; but this cannot be ascertained before death, and for the most part it has been preceded by *gastritis*. This should also be called *gastro-enteritis*.

132. *Gastro-enteritis* presents itself under two forms; with predominance of the gastric inflammation, and with that of *enteritis*. Gastric pain, loss of appetite, rejection of, or difficulty of retaining the ingesta, characterise the first: the power of satisfying thirst, and rapid absorption of appropriate fluids, are the signs of the second. The other symptoms are chiefly common to both.

133. Acute inflammation of the mucous membrane of the small intestines, without affection of the peritoneum, does not occasion colic in most cases. It is always without circumscribed pain; but often attended with a sensation of burning, of vague uneasiness and constipation. The intussusception of this intestine, so far from producing ileus, does not commonly produce even colic.

134. Colic, frequency of dejections and tenesmus, are the proper signs of inflammation of the mucous membrane of the colon.

135. The word *enteritis* being appropriated to inflamma-

tion of the small intestines, cannot be applied to that of the colon; this must therefore be called *colitis*. But the two succeed, and are associated with each other.

136. Gastro-enteritis exists without any fixed pain, when the inflammation does not predominate with force, either in the stomach or duodenum; and even pressure upon the abdomen does not produce pain.

137. Gastro-enteritis is recognised by the sympathies which it develops: viz. 1st, The organic; redness and heat of the outlets of the mucous membranes, and of the skin, and alteration of the secretions of bile, urine, and especially of mucus:—2d, The relative; pains of the head and limbs, aberration of the faculties of perception and judgment. The influence exercised upon the heart is common to many other phlegmasiæ.

138. All cases of acute gastro-enteritis, which become exasperated, are attended at last by stupor, blackness of the tongue, lividity, fetor, prostration, and represent what is called putrid, typhus, or adynamic fever: those, in which the irritation of the brain becomes considerable, whether it amounts to the degree of inflammation or not, produce delirium, convulsions, &c. and take the names of malignant, nervous or ataxic fevers.

139. All the *essential* fevers of authors may be referred to gastro-enteritis, either simple or complicated. They have all mistaken it, when it has been unattended with local pain, and even when there are pains, they being regarded as accidental.

140. Authors have sometimes said that certain fevers depended upon inflammation of the digestive organs; but they have never asserted that the putrid and essential fevers could have no other cause; nor, that they are produced by the same mechanism as the fever in pneumonia, &c.; never, that there are no essential fevers. All this has been asserted—only since the introduction of the physiological doctrines.

141. Authors, not knowing that the internal membrane

of the small intestines might be inflamed without local pain, have all ascribed to their enteritis, the symptoms of peritonitis.

142. It is by an acute gastro-enteritis, the first effect of the contagious agent, that the small-pox begins. The cutaneous phlegmasia succeeds it, and puts an end to it, where the number of pustules is small; but it reproduces it, if the pustules are numerous, by the erysipelas, which results from the confluence of the areolæ; such is the *secondary fever* of small-pox, called also the *suppurative fever*.

143. Measles and scarlatina begin by gastro-enteritis, and by an acute catarrhal inflammation of the eyes, nose, throat, or bronchiæ. These phlegmasiæ constitute the whole danger of these diseases, by becoming violent, and attacking the brain and all the viscera. The angina in scarlatina often becomes fatal; and attention should be paid to the bronchial catarrh in measles, which produces, from the commencement, a puriform expectoration; and which, even when it is not converted into pneumonia, may produce strangulation, by intercepting the passage of the air.

144. Hypochondria is the effect of a chronic gastro-enteritis, which acts with energy upon a brain predisposed to irritation.

145. Most cases of dyspepsia, gastrodynia, gastralgia, pyrosis, cardialgia, and cases of boulimia, are the effects of a chronic gastro-enteritis.

146. Umbilical, intermittent or remittent colics, with constipation, and without tenesmus, characterise certain shades of inflammation of the mucous membrane of the small intestines, particularly in the chronic state, if the symptoms of peritonitis do not exist; but this enteritis is oftener indolent than painful.

147. The lymphatic ganglions of the mesentery are not inflamed, except from the effect of enteritis; and this double inflammation prolonged, constitutes the *tabes mesenterica*, (*carreau*).

148. The ganglions of the mesentery are not inflamed by simple peritonitis.

149. Hepatitis is consecutive to gastro-enteritis, which does not arise from external violence.

150. Chronic gastro-enteritis, is the cause of hepatic engorgements, and of yellow and fat livers, even in phthisical subjects.

151. Dropsy, in persons who have used alcoholic liquors or purgatives too freely, is the effect of a chronic gastro-enteritis, which has involved the whole thickness of the digestive canal, the liver, &c. and which has slowly penetrated to the peritoneum.

152. Boulimia is the effect of a chronic gastro-enteritis, with predominance of gastro-duodenal irritation; this phlegmasia may exist in a degree, which permits the assimilation of a quantity of aliments much beyond the necessities of the system, from whence result plethora, fatness, and afterwards the explosion of irritation upon the brain, the joints, the kidneys, the heart, the margin of the anus, in a word, at all points, in which an accidental stimulation may develop it.

153. Cases of gastritis with boulimia, often depend upon the abuse of stimulating *ingesta*, and especially of the medicines called stomachic, administered when the gastritis exists in a slight degree only.

154. The excessive assimilation in boulimic gastritis, is always attended with more or less local and sympathetic pain. These pains are afterwards exasperated to such a degree, as to render digestion dreadful to the patient, even when the appetite is excessive; they terminate in destroying appetite, producing emaciation, vomiting, &c.; and the gastritis sometimes passes to the acute state.

155. When a long continued employment of stimulants has much increased the sensibility of the stomach, the cure is long and difficult, and relapses very easily occur; it is rare, that in this case there is not a degree of cerebral irritation

sufficient to produce hypochondria; and scirrhus or perforation of the stomach often closes the scene.

156. Inflammation in the acute state, often passes from the mucous membrane to the peritoneum.

157. Acute hepatitis is not mortal, unless from the addition of gastro-enteritis, peritonitis, or inflammation of the organs of the chest, or the cranial cavity.

158. Acute nephritis is not mortal, but from the complication of inflammations of the principal viscera.

159. Acute cases of peritonitis in women in childbed, commonly commence by an inflammation of the internal membrane, and of the whole thickness of the uterus.

160. Prolonged irritations of the mucous membrane of the vagina, almost always produce inflammation of the neck of the uterus and of the ovaries; hence arise scirrhus, cancer, &c.

161. Scirrhus of the neck of the uterus is often the effect of injuries suffered in labour.

162. Painful menstruation indicates a perpetual source of irritation in the neck of the uterus, and cancer of this part is often the consequence at the period which is called critical, if the irritation has not been relieved long before this.

163. Peripneumonia often commences by catarrh, or an inflammation of the mucous membrane of the bronchiæ. The superior lobes of the lungs are then the principal seat of inflammation; and if this inflammation is chronic, it develops tubercles in the upper portions of the parenchyma, and thus produces phthisis.

164. Peripneumonia of the middle and inferior lobes of the lungs, often begins without having been preceded by bronchial catarrh: if it becomes chronic, tubercles are developed there, and phthisis supervenes.

165. Pleurisy causes atrophy of the lung of the side diseased, in most cases, without producing its inflammation, from the purulent collection it produces; but at the same time pneumonia is sometimes developed in the lung of the

opposite side ; and if this becomes chronic, phthisis is there developed.

166. Pleurisy which is chiefly confined to the pleura pulmonalis, without collection of pus or atrophia of the lung which it invests, sometimes produces inflammation of this lung, and may, if it passes to a chronic state, produce phthisis.

167. Tubercles which succeed to inflammation of the internal membrane of the bronchia, and of the bronchial vesicles, are produced in the same manner as those of the mesentery in chronic enteritis.

168. I have never seen tubercles of the lungs without a preceding inflammation. Those even which are found in children at birth, do not appear to me to be independent of this phenomenon.

169. Tubercles may be formed in all constitutions attacked by chronic inflammation of the lungs or intestines ; but they are larger in subjects who are predisposed to irritations of the lymphatic system.

170. Cartilaginous, osseous, and calcareous granulations, melanosis, scirrhous, encephaloid tumours, and cancer of the lungs, are produced in the same manner as ordinary tubercles.

171. The name *phthisis pulmonalis*, expressing only the disorganization, which is the result of inflammation of the parenchyma of the lungs, cannot be applied to this inflammation. It is better to call it chronic pneumonia, specifying by which of the tissues composing the viscus it has commenced.

172. The serous membrane of the heart is often inflamed, which is called pericarditis. It is characterized by the seat of the pain, and by the depression and irregularity of the circulation ; which produces anxiety, fainting, and the fear of death.

173. The internal membrane of the heart is also inflamed, which is common carditis. This form of carditis affects, in preference, the orifices of the arteries, when it often be-

comes chronic, and produces obstacles to the course of the blood, as increased thickness, vegetations, ossifications, and afterwards hypertrophy of the heart, and aneurism. Irritation or inflammation, which has commenced in the locomotive apparatus, often produces carditis, by becoming fixed in the interior of the heart.

174. Irritation of the different tissues, which is sufficiently intense to react upon the heart, may produce inflammation of both its membranes. That of the internal membrane of the arteries, is caused by the same *mechanism*, and cannot, by itself, keep up a violent fever.

175. Acute and suppurating inflammation of the muscular substance of the heart, is a very rare affection ; but this tissue always degenerates after a certain time, from the inflammation of the two membranes.

176. The most dangerous consequences of aneurism of the heart, arise from the obstacle opposed to the circulation of the blood ; hence come asthmas, hæmorrhages from the different passages, and dropsy ; but gastritis never fails to associate itself with the other symptoms, and this in proportion to the stimulating character of the treatment.

177. Ossification of the proper arteries of the heart, must be the consequence of the inflammation of its internal membrane, or of that of the large arteries.

178. Dilatation of the end of the aorta, is often the result of chronic inflammation of its tissues. This degeneration may obliterate the orifices of the arteries which carry blood to the arms and head. The same inflammation produces friability of the other arteries, and aneurism, which has been so well described by Scarpa.

179. Scrophula is an irritation of the external tissues, in which the albuminous part of the blood predominates ; but as the heat is slight, and there is no redness, it may be distinguished by a particular name. Is that of sub-inflammation appropriate ?

180. Inflammation is associated with this sub-inflamma-

tion either as its cause or effect, and sometimes accompanies it through its whole duration.

181. Sub-inflammation of the lymphatic tissues, is not developed previously to inflammation, except in the parts composing the skeleton, and in the parts covering it; it is produced in these, like rheumatism, by the action of cold upon the skin, or by accidental irritations; as for the viscera, they are affected by it, only consecutively to their inflammation. The same may be said of the syphilitic sub-inflammations.

182. The skin is susceptible of a chronic irritation, which affects its excretory tissues and its absorbent vessels in a particular manner; and which renders it morbid by engorging it with degenerated albumen. Is not this a kind of sub-inflammation, with which inflammation may be associated in different degrees? When the inflammation is communicated from the sub-inflamed skin to the viscera, it does not penetrate to their lymphatic ganglions, without a previous inflammation of their membranes.

183. Lymphatic ganglions do not become tumefied, indurated or softened, but by increase of their irritability and contractility, that is by their irritation, which is one of the sub-inflammations.

184. Tumefactions of an appearance analogous to that of sub-inflamed ganglions, but occurring in tissues in which lymphatic glands are not perceptible in the healthy state, should be considered of the same nature as the lymphatic ganglions developed by inflammation. All these bear the name of tubercles.

185. When fasciculi of absorbent vessels chronically irritated, degenerate into tubercles, some lymphatic vessels may be dilated by a passive engorgement produced by some compression or obstacle to the course of the lymph. This is to the absorbents what varices is to the viscus.

186. The cellular tissues are, next to the mucous, the most susceptible of acute inflammation; then they suppu-

rate; but they may suppurate without the inflammation, having been perceptible from external symptoms.

187. Concealed points of phlegmonous suppuration with absorption of pus, cannot produce the fever called hectic, except by the irritation communicated to the principal viscera, either by sympathy with the part still inflamed, or from the stimulant impression of the absorbed pus. This fever then is not more essential than the others.

188. When the cellular tissues become slowly engorged with lymph or fat, and become indurated, without exhibiting the phenomena of inflammation, or after inflammation is extinct in them, this state is always owing to the increase of their irritability and contractility, and never to a contrary state: this is also a species of sub-inflammation.

189. The fat and lymph which form the cellular engorgements with induration, have always degenerated; if they become soft, inflammation is then developed. This takes place in encephaloid tumours, in melanosis, scirrhus, &c.; hence come cancers, which also supervene upon tubercles, &c.

190. When irritation has prevailed under the form of inflammation or sub-inflammation in the tissues of the articular or arterial membranes, and other tissues naturally dry and slightly extensible, there is an extravasation of albumen, and this humour dries by absorption, producing calcareous concretions: those, for example, which occur in gout. These concretions are then the effects of irritation. The case is the same with those, which are formed in the midst of lymphatic ganglions which have become tuberculous, and sometimes in the follicles which secrete mucus.

191. A dark colour often exists in lymphatic tumefactions; these are usually called melanoses.

192. External cancer, the product of the irritative degeneration of the tissues in which albumen or fat predominate, is always attended by inflammation: it is not incurable while it is local only.

193. The inflammation of external cancer is repeated by

sympathy in the principal viscera ; but cancer is not developed in them, except as a consequence of this inflammation. It may not occur even then ; the cancerous diathesis is not therefore of so frequent occurrence as is believed.

194. The progress of cancer is always in proportion to the inflammation which exists with it.

195. All inflammations and sub-inflammations may produce cancer.

196. The inflammation of the serous membranes have only two forms, the one acute, attended by much pain and fever, the other chronic, almost indolent and apyretic. This last is confounded with sub-inflammation.

197. The inflammations of the mucous membranes have more multiplied forms and degrees than those of the serous ; because the mucous membranes, as internal senses, and the continual movers of sympathies, have a more varied and intense sensibility and irritability, than the serous membranes, which have neither sensibility nor sympathies in a healthy state.

198. All hæmorrhages which do not occur from external violence, and which are spontaneous, are active, whatever may be the weakness of the subject.

199. Spontaneous hæmorrhages depend upon an irritation of the sanguine capillaries ; but they occur more easily when there is hypertrophy of the heart.

200. Spontaneous hæmorrhages depend upon the same remote causes as inflammations ; they also appear as complications, as causes and effects of these in the same parts ; and they alternate with them in different parts.

201. The neuroses are active or passive, while inflammations and sub-inflammations must be active.

202. The active neuroses consist in an increase of sensibility in the nerves of relation, and of the muscular and vascular contractility under the influence of these nerves : they may occur in the muscles of locomotion, in the viscera, and in all the capillaries where the nerves of relation predominate : for example, the neuralgiæ.

203. The passive neuroses consist in the diminution or entire loss of muscular sensibility and contractility ; they cannot occur therefore, except in the locomotive and sensitive apparatus.

204. The active and passive neuroses are most frequently occasioned by an inflammation in the cerebral apparatus, or in the other viscera ; the passive sometimes depend upon a sedative influence acting upon the nerves in which they appear.

205. In the active neuroses occurring in the apparatus of relation, the capillary circulation is excited, there is congestion, inflammation and sub-inflammation exist or are to be feared, in the tissues where the neurosis appears, and also in the point of the cerebral apparatus, to which the nerves of these tissues correspond ; while the operation of the intermediate nervous cords is limited to transmitting the sympathetic influences from one point to the other.

206. When, in the neuroses of the viscera of the chest and abdomen, there are pains, or convulsions in the muscles of locomotion, there are two points of irritation, which are inflamed or tend to inflammation, one in the viscera, the other in the cephalic apparatus.

207. Obstacles to the circulation do not derange the functions of the principal viscera, unless they are situated in the heart or large vessels.

208. In the case of obstacles to the circulation, dropsy occurs from stagnation of blood in the venous apparatus.

209. The sudden increase of dyspnœa produced by locomotion, in aneurisms of the heart, proves the influence of the muscular system upon the venous circulation.

210. Inflammatory congestions and the secretions, prove the influence of the capillary system in the circulation of the blood.

211. Absorption demonstrates the influence of the capillary system upon the progression of other fluids than the blood.

212. The uneasiness and anxiety caused by obstacles to

the circulation of the blood, sooner or later produce gastritis ; stimulating medicines accelerate its progress.

213. Scurvy is a particular state of the solids and fluids, produced by an imperfect assimilation ; its causes are then various ; but cold, want of light, sadness and bad nourishment are the principal. The extravasation of the fluids is one of the principal effects of the scorbutic state, because this disease renders all the tissues fragile ; but the viscera, and particularly the encephalic apparatus, resist longer than the tissues by which the skeleton is invested.

214. The phlegmasiæ are easily associated with scurvy, but do not depend upon it ; they arise from the causes which usually produce them ; such is the inflammation of the gums.

215. External violence, violent motions, stimulating medicines and inflammations, easily produce the rupture and disorganization of parts modified by the scurvy, because vital chemistry languishes and vitality is diminished in scorbutic systems.

216. The physiological causes of dropsy are obstacles to the course of the blood and lymph, the sympathetic influence of a chronic inflammation, the cessation of the action of the depurative or absorbent capillaries, imperfect assimilation and debility.

217. Irritation presents natural intermissions in a state of health.

218. Morbid irritation may be intermittent in every apparatus, and in all the organic systems.

219. Morbid irritation may continue in an apparatus to a moderate degree, be periodically exasperated, and then return to its first state. In this case, if it is moderate, it excites few sympathies ; when it is exasperated, it develops a greater number of them : these are the remittent, subintrant, and other fevers of authors.

220. Intermittent and remittent irritations are always attended by an augmentation of sensibility and contractility, and consequently by congestion, either in the principal seat

of the disease, or in the parts where sympathies are excited by it.

221. Intermittent and remittent irritations are always phlegmasiæ, hæmorrhages, neuroses, or sub-inflammations, which are removed and terminate spontaneously by critical metastases; if they are not removed, they are converted into continued phlegmasiæ, hæmorrhages, neuroses, or sub-inflammations, either acute or chronic.

222. Intermittent and remittent fevers are cases of periodical gastro-enteritis; but the brain and other viscera are sympathetically irritated, in the same manner as in continued fevers, and may also become the principal seat of irritation and inflammation, either continued or periodical.

223. Each regular attack of intermittent fever is the sign of a gastro-enteritis, the irritation of which is transferred to the cutaneous exhalants, producing a crisis: if the irritation is not completely displaced, the fever is remittent; if it ceases to remove at all, it becomes continued.

224. The disguised fevers (*f. larvees*) of authors, are periodical irritations of different systems or *apparatûs*, either internal or external, but in which the heart is less affected, and the heat little or not at all increased.

225. The fevers called malignant, do not differ from the others but by the violence and danger of the congestions.

226. Dropsies following intermittent fevers, always depend upon one of the five causes or physiological modifications indicated in Prop. 118.

227. The most common external causes of intermittent fevers, are the alternation of atmospheric cold and heat; but every cause which modifies the system in the same manner as these vicissitudes, may produce, and still more easily reproduce them.

228. The cause of the periodical return of certain pains and convulsions, which recur during a long time, is unknown.

229. Rheumatism is a phlegmasia of the fibrous or synovial membranes produced by vicissitudes of external cold and heat; it is therefore not surprising that they are often intermittent and periodical.

230. Periodical inflammations of the joints change their seat by means of sympathies, and are terminated by crises or by fixing themselves in some other part in an acute or chronic form, like the visceral phlegmasiæ, when they are left to themselves.

231. Gout does not differ from arthritis, (or simple inflammation of the joints,) except in circumstances belonging to the age or idiosyncrasies of the subject.

232. The articular inflammations degenerate into sub-inflammations, when they become chronic : hence arise nodes, concretions, &c.

233. The form of articular phlegmasia called gout, is often, although not always, complicated with a chronic gastro-enteritis, which modifies its progress, and attracts irritation to the viscera.

234. The liver is not affected in gout, except consecutively to an accompanying chronic gastro-enteritis.

235. The irritation of gastro-enteritis is communicated to the joints by means of sympathy, under the form of arthritis and gout ; but this does not take place, till the influence of atmospheric vicissitudes, or some other external irritant has given the joints a predisposition to it.

236. The irritation of the inflammations of the joints, develops that of the stomach by sympathy ; and this sometimes becomes predominant.

237. The multiplied infirmities which torment old gouty subjects, (the gouty diathesis and cacochymia,) are sympathies of the stomach, brain, &c. which have increased and become transformed into phlegmasiæ, neuroses, and sub-inflammations : or perhaps these phlegmasiæ, &c. are original.

238. In chronic and repeated articular inflammations, irritation always advances from the circumference towards the centre ; but the case is the same with all external inflammations.

239. The transformation of the gout into another disease, is nothing but the displacement of the principal point of ir-

ritation, which produces effects proportionate to the structure and vitality of the different tissues it occupies.

240. It is absurd to call an affection gout, which has not been preceded by an articular inflammation; it is as much so, to give this name to one which has been preceded by it: for to say that the gout is transferred to the brain, when mania supervenes upon an inflammation of the joints, is just as if you should say that mania is transferred to the great toe, when gout takes the place of an attack of delirium.

241. In the retrocessions of gout we should not recollect the seat first occupied by the irritation, except to determine the point where revulsion may best be attempted.

242. Revulsion is impossible in what is called misplaced gout, except when the viscus attacked has not yet suffered disorganization.

243. Acrid vegetables, which in small doses are emetic, purgative, drastic, diuretic, &c. excite inflammation and ulceration of the mucous membrane of the digestive canal, when given in large doses; and secondarily, pains and convulsions, which differ according to idiosyncrasy.

244. Vegetables which are astringent in small doses, become causes of gastro-enteritis, when given in a large dose.

245. Narcotic vegetables, and alcoholic substances in a large dose, excite gastro-enteritis without ulceration, and engorge the brain with blood, with various convulsions and delirium; they also produce engorgement of the lungs.

246. Acrid vegetables, called antiscorbutic, in a large dose excite gastro-enteritis.

247. Corrosive or escharotic mineral substances, produce gastro-enteritis, without an eschar, and ulceration consecutively, when given in small doses: in larger doses, they develop this inflammation about the eschars they have produced. In all cases, there result delirium and convulsions, offering numerous varieties.

248. If arsenic is not promptly fatal, it produces inflammation of the gastric passages, in degrees, which vary according to the doses and idiosyncrasy; hence arise engorge-

ment and inflammation of the brain and lungs, and sometimes phenomena analogous to those of the pretended putrid and typhus fevers.

249. The preparations of lead produce, in small doses, astriction of the gastro-intestinal mucous membrane, painful convulsions of the muscular coat of the digestive canal, when result colic and vomiting, and sympathetically, convulsions of the limbs; but in a larger dose, and in proportion to individual disposition, they produce gastro-enteritis, associated with more or less of a convulsive state. Hence come the great varieties in the effects of emetics, drastics, opium, sudorifics, which are employed in the treatment of colics produced by lead.

250. Mineral astringents, as the sulphates of alumine, zinc, or iron, act nearly in the same manner as the preparations of lead.

251. Corrosive sublimate, in slightly excessive doses, inflames the gastric passages; but in excessive doses, it produces ulceration and inflammation, also various pains and convulsions in the intestines and in the muscles of relation.

252. All the preparations of mercury and copper, are excitants, and their excess always produces gastro-enteritis.

253. Cantharides produce gastro-enteritis, and at the same time inflammation of the urinary organs.

254. Putrefied meat which the stomach cannot assimilate, produces gastro-enteritis, with irritation and engorgement of the brain, and by the intensity of the nervous phenomena, it produces the symptoms of typhus; but ulceration does not occur except consecutively, and after a certain continuance of inflammation.

255. Spoiled fish and poisonous mushrooms, produce gastro-enteritis, attended by much anxiety, meteorism, colic, &c. imitating also the symptoms of typhus, and often the cutaneous inflammations: the delirium and convulsions, among which should be included tremors or subsultus of the tendons, are also at least as considerable in these cases, as in those of poisoning by putrid meat.

256. All the inflaming and escharotic poisons, whether vegetable, animal, or mineral, when applied to the skin in strong doses, produce, by the transmission of the irritation to the interior, an inflammation in the mucous membrane, in the brain, and some of them in the lungs, analogous to those they produce externally.

257. Poisons of all kinds injected into the blood-vessels, produce gastro-enteritis, &c. if they are not sufficiently powerful to produce immediate death.

258. Putrefied flesh inserted into the living flesh, or its sanies injected into the blood-vessels, act upon the gastric passages, as if they had been swallowed, when a sudden death does not prevent gastro-enteritis.

259. The punctures and bites of poisonous animals, which leave a poison in the wound, produce a local phlegmasia, which soon passes into gangrene, according to the violence of the irritation; then the most dangerous of these poisons produce anxiety and death, from their effects upon the nervous system. But if life continues, the inflammation is repeated in the principal viscera, especially in the gastric passages; and always with a tendency to mortification. Gangrene is then here, as in other cases, the result of a too rapid augmentation of the phenomena of life. Lastly, the gentlest of these poisons produce only a local inflammation.

260. The bites of rabid animals always produce gastro-enteritis, and the inflammation is often repeated in the pharynx, in the brain, in the lungs, and in the genital organs. Delirium and convulsions are always the sympathetic effects of these inflammations, and vary according to the degree of susceptibility or idiosyncrasy.

261. Worms in the first passages, are often, but not always, the result of the alternation of the mucus, and of the heat, which are produced by a more or less violent gastro-enteritis; hence the so varied effects of anthelmintic irritants.

(To be continued.)

ART. II. *An Inquiry relative to the causes, nature, and treatment of Bilious Colic ; with remarks intended to prove the unity of this disease and Colica Pictonum.* By HENRY STALEY, L. M. C. F. of Woodsborough, Maryland.

THE disease, which is the subject of this inquiry, whether considered in regard to its frequent occurrence, the obstinacy of its symptoms, or the excruciating torture to which it subjects its unhappy victims, is manifestly entitled to the greatest attention of the votaries of medical science. Though seldom proving fatal when judiciously treated, it is attended with a degree of pain and distress, which make the most eloquent appeal to the feelings and sympathy of the physician, and demand the utmost exertion of his skill. Deeply impressed with this view of the subject, I am induced to offer the following remarks, with a view of illustrating the causes and pathology of the disease in question, as affording the only firm basis for a rational, scientific, and successful mode of treatment.

I do not hold myself responsible for the propriety of the term *bilious colic*, though I have retained it in conformity to custom ; this being the term by which the disease is usually designated. To the term, so far as it implies simply, *derangement* of the biliary or hepatic system, I take no exceptions ; but as it also implies a *redundancy* of the biliary secretion, I cannot subscribe to its propriety. Perhaps *hepatic colic* would be more appropriate.

That functional derangement of the hepatic system, and the disease under consideration, stand in the relation of cause and effect, I shall endeavour to prove in the sequel ; and also that the same remark will apply to *colica pictonum*, or dry belly-ache,—a disease which bears a greater affinity to the subject of this inquiry, than has been generally imagined. Without any fastidious adherence to *arrangement*, I presume the further consideration of this part

of the subject will properly be preceded by a history of the symptoms as they manifest themselves in bilious colic.

In the generality of cases the approach of this disease is gradual and insidious. The patient complains of a sense of weight and obtuse pain in the region of the stomach, defective appetite, languor, a tendency to costiveness, and pain in the lower extremities for eight or ten days previous to the attack of colic. A gentleman of this place, whom I have attended in three attacks of this disease, informed me that he uniformly experienced a sensation of weight, obtuse pain, and oppression of the chest, for many days previous to the symptoms which disclosed to him the real nature of his disease. In some instances, after sudden transitions from a warm to a cold atmosphere, or the application of cold water to the feet while the perspiration is free, colic speedily supervenes. Sleeping on the ground exposed to night air has ushered in an attack of colica pictonum in the West Indies, and the *colic of Madrid* in Spain. Bilious colic is most apt to occur in this sudden manner, in those who are in a state of convalescence from a previous attack; and in those who have recently suffered from bilious remitting or intermitting fever.

The disease manifests itself by an acute pain in the stomach or intestines, moving from one part of the abdomen to another with great rapidity; it is generally most severe about the umbilicus, and is alternated with occasional remissions. The pain is not unfrequently so excruciating as to induce the patient to roll over the bed or floor, uttering the most plaintive cries; changing the position of the body every succeeding moment; and declaring that his bowels feel as if they were violently "screwed together." In the early stage of the complaint, pressure on the bowels affords partial relief; but in a day or two they become considerably tender to the touch. The stomach is irritable from the commencement; and after repeated efforts to vomit, a quantity of vitiated bilious matter is discharged. Vomiting, whether spontaneous, or artificially produced, affords a tem-

porary relief from acute suffering. Thirst and furred tongue become manifest pretty early in the disease ; and the bowels are obstinately constipated from the commencement. In some instances, the first effects of the spasmodic action of the intestines, is a discharge of the contents of the rectum ;—a symptom which sometimes deceives both patient and physician, by inducing the belief that the bowels are in a favourable state to be acted on by cathartics.

The pulse varies greatly, according to the degree of violence and stage of the disease. In the early stage, and particularly in the milder cases, the pulse indicates no material disorder of the system ; but if relief is not speedily obtained, it becomes increased in fulness, frequency, and force. In some subjects it will be found preternaturally slow, while it is fuller and harder than in health. Where the spasms are extremely violent at the commencement, the extremities are sometimes cold and the pulse feeble for a time ; but reaction soon takes place : and where much intestinal inflammation exists, as is sometimes the case where the disease has been neglected at the commencement, the pulse will be small, quick, and hard.

A yellowness of the skin and tunica adnata, is frequently perceptible a few days previous to an attack of this disease ; and is a very general attendant on the second, third, or fourth day. By the early exhibition of an emetic, and the prompt operation of cathartic medicines, this bilious suffusion is sometimes prevented.

Eructations are not uncommon pretty early in the disease ; and are generally productive of partial momentary relief. In the progress of the complaint singultus frequently becomes troublesome and harassing to the patient. This last symptom has been considered as affording an unfavourable prognosis ; but, although it precedes death from this disease, I have seen it in a great number of cases where the symptoms were removed by the remedies to be hereafter mentioned, with no extraordinary difficulty.

The nervous system suffers much in the more obstinate

cases, as is manifested by mental despondency and convulsive twitchings of the arms. During the autumn and winter of 1821, when this disease prevailed in this neighbourhood to an extent, and with an obstinacy of symptoms quite unusual, convulsions of the whole system were frequent attendants. I was requested to visit a young gentleman who, I was informed, had twenty-four "convulsion fits" in as many hours. No remedy, except bloodletting, was found adequate to the removal of this dangerous and distressing symptom; but it affords me peculiar pleasure to state, that where this remedy was used extensively, it proved uniformly successful.

A numbness and tremor of the superior extremities sometimes accompanied the more severe cases of this disease. I recently witnessed one case where the arms were so completely paralysed, that all power of voluntary motion was destroyed. This was a case of relapse from imprudent exposure during a state of convalescence.

The urine is high-coloured, scanty in quantity, and sometimes voided with difficulty.

This detail of symptoms presents the disease in its most aggravated form, such as I have had ample opportunities of witnessing it within the last two or three years. In this form it corresponds, in a great measure, with the *colica pictonum* of West-India writers, and may fairly be considered as depending upon the same causes, as I shall endeavour to demonstrate in the progress of this inquiry. The milder operation of the same causes will exhibit the disease in a less aggravated form, as I have also had frequent occasion to observe.

Though this disease do occur at all seasons of the year, my observation does not enable me to confirm the opinion that it "prevails most in the summer."* In this section of the country, it prevails most extensively from the autumnal equinox to the middle of winter; though the most in-

* Thatcher's American Modern Practice.

flammatory cases which I have met with, occurred in the summer season, and appeared to be but a different form of disease, arising from the same remote causes with the bilious remitting and intermitting fever of our country. A retrospective view of the disease, as it has appeared in different situations, will not be unacceptable, as affording some *data* in support of the opinion which I shall maintain relative to its ætiology. This will be the more proper, inasmuch as this part of the subject has been but slightly glanced at by preceding writers. While all delineate the symptoms, very few have traced the links in the chain of causation, upon which only a rational *methodus medendi* can be founded.

The illustrious Sydenham, whose talent for patient and accurate observation cannot be disputed, in his account of the epidemic constitution of part of the year 1669, and of the years 1670, 1671 and 1672, at London, informs us, that, "In the beginning of August 1669, the cholera morbus, the *dry gripes*, and likewise a dysentery that rarely appeared during the ten preceding years, began to rage. But though the cholera morbus proved more epidemic than I had ever known it, yet nevertheless it terminated this year in August, as it always does, and scarce reached the first weeks of September. But the dry gripes continued to the end of autumn, and accompanied the dysentery, and prevailed more generally than that distemper." Again: "During all the years of this constitution, the blood was considerably disposed to deposite hot and choleric humours in the intestines, whence the *bilious colic* prevailed more than ordinary." The symptoms of this last disease, as detailed by this author, correspond with those of the disease by the same name in its moderately aggravated form, in this section of the country.

During the ever memorable summer and autumn of 1793, while the yellow fever raged with desolating and terrific sway in Philadelphia, a *bilious colic*, corresponding with the disease which is the subject of the present inquiry, prevailed to an alarming extent in Dover, in the state of De-

laware. Dr. Miller, who describes the disease in a letter to Dr. Rush,* dated Dover, Nov. 5th, 1793, says: "The inference I mean to draw from the phenomena of this disease, as it appears in this neighbourhood, and which I presume will also apply to your epidemic, is *this*, that from the uncommon protraction and intenseness of our summer and autumnal heats, but principally from the unusual drought we have had, since the middle of July, a near approach to a tropical season, and that of consequence we ought not to be surprised if *tropical diseases*, even of the most malignant nature, are engendered amongst us."

In his account of the bilious yellow fever of 1794, Dr. Rush says: "I likewise attended three women, in whom I discovered the disease in forms, under which I had *often seen* it in the year 1793. In two of them, it appeared with symptoms of violent *colic*, which yielded only to frequent bleedings." A few pages further on, in the same "account," this author informs us that "pains in the bowels were very common. They formed the true *bilious colic*, so often mentioned by West-India writers." And again, this American Sydenham, in enumerating the "usual forms of the disease produced by *miasmata* from the sources of them which have been enumerated," includes *colic* and cholera morbus; and then adds the following remarks:

"In deriving all the above forms of disease from *miasmata*, I do not mean to insinuate, that sporadic cases of each of them are not produced by other causes."

So far as my observation has extended, I find the cases of bilious colic, uniformly most numerous during and immediately after a summer remarkable for the prevalence of bilious remitting and intermitting fever; insomuch that the former may be said to follow the latter in a pretty direct ratio. During the autumn and winter of 1821, after a summer remarkable for the extensive prevalence of the bilious remitting and intermitting fever, the bilious colic prevailed

* Rush's Inquiries, 4th edition, vol. ii. p. 106.

to an extent, and with a violence and obstinacy of symptoms quite unusual in temperate latitudes.

From a consideration of these facts, and an attentive observation of the disease, the conclusion is irresistible, that marsh miasmata, heat and drought, irregularity and intemperance, and all those agents which produce excessive action in the cutaneous and hepatic secretory vessels, may operate as remote or predisposing causes of bilious colic, as well as of colica pictonum. It is a fact sufficiently established by tropical writers, and particularly by Dr. James Johnson, &c. &c. in his "*Practical Treatise on derangements of the liver and digestive organs*;" and in his essays on "*The Influence of tropical climates on European constitutions*," that by excessive action the vessels in question become debilitated, and proportionably more easily struck torpid by the operation of agents calculated to produce an interruption to their functions. Upon this principle only, can we rationally account for the phenomena exhibited in bilious colic; a principle which will enable us to trace the links in the chain of their causation, without referring them to the far-famed *vis medicatrix naturæ*, or the secret and inexplicable "*laws of sympathy and association*."

When, from the causes above mentioned, the biliary and perspiratory vessels are inordinately excited, the sudden transition from a high to a low range of atmospherical temperature; exposure to night air; or the application of cold water to the feet, or any other part of the body, by suddenly checking their secretions, will be followed by torpor and functional derangement of those vessels too greatly predisposed to such an effect by the previous state of excessive action. The necessary consequences of this torpor and inactivity are, a deficiency in the quantity of fluid secreted, an engorgement or congestion of the hepatic and portal circles, with a consequent inequilibrium of excitement in the system.

It may be urged as an objection to this view of the subject in connection with bilious colic, that the same pheno-

mena take place in other forms of disease. This I grant ; and agree with Dr. James Johnson,* that the " same causes that, applied to one person, will produce bilious fever, will, in a second, give rise to hepatitis ; in a third, to *mort de chien* ; and in a fourth, to dysentery ;" and I will add, in a fifth, to bilious colic, &c. according to concurrent circumstances and the predisposition of the patients. For instance, where the operation of heat and drought, with or without the agency of miasmata, are so violent and long continued as to produce torpor of the hepatic and cutaneous vessels from excessive action alone, local congestion, inequilibrium of the circulation, and feverish excitement will follow ; and bilious fever or hepatitis will be the consequence. By a slight modification of the same causes, and perhaps in the predisposition of the patient, the cœliac and mesenteric vessels will suffer most from the plethora induced. " The perspiration being stopped, a vicarious discharge of mucus and acrid serum is thrown from the extremities of the turgid mesenteric vessels upon the internal surface of the intestines, which by this time are in a state of irritability,"* and dysenteric symptoms will become manifest. And where the operation of the same cause is comparatively mild, producing slight functional derangement of the hepatic vessels, with a corresponding deficiency in the biliary secretion, without any immediate general commotion of the system, a bilious colic will ensue. This last sentence receives confirmation from the fact, that a less concentrated state of the same causes which produced the bilious yellow fever of 1793, in Philadelphia, produced a violent bilious colic in Dover. That these different forms of disease arise from the same remote causes, is also confirmed by the facts, that two or more of them sometimes exist at the same time, in the same individual, as was the case in

* On Tropical Climates, Art. Dysentery.

† Ibid.

Philadelphia in 1794,* and in this neighbourhood in 1821; that in the same place, and in the same season, one person will have bilious fever; a second, cholera morbus or *mort de chien*; a third, dysentery; and a fourth, bilious cholic, as I have occasionally observed. Witness also Sydenham's account of his dysenteric fever; and the extract already taken from that author.

To dwell in illustration of my pathological views of bilious fever and dysentery, would be foreign to my present purpose; but a few additional remarks relative to those in connection with bilious colic may not be deemed improper.

That a healthy state of the biliary vessels is absolutely necessary to the regular and uninterrupted functions of the digestive tube, and the due elaboration of chyle, is a physiological fact established beyond the possibility of doubt. Whether the salutary effects of bile in the digestive tube, are referrible to its lubricating and cathartic qualities; to its gentle stimulus in the stomach, as the case recorded by Vesalius (where the ductus communis choledocus opened directly into the stomach of a convict who had been remarkable for his voracious appetite,) seems to imply; or, which is most probable, to its producing, in conjunction with the pancreatic fluid, a chemical effect upon the chyme, is not material to my present purpose: its agency in the process of digestion and chylication is universally admitted. Hence when this fluid is deficient in quantity, or vitiated in quality, functional derangements of the digestive tube with atony of the stomach, must necessarily ensue; as is evinced by anorexia, eructations, &c. "The aliment passes into the duodenum imperfectly digested—it there meets a scanty supply of ill-conditioned or insipid bile and pancreatic juice. Under these circumstances, the progress of the chyme through the convolutions of the intestines must be slow, and the chyle imperfectly eliminated. Fecal accumulations take place; and probably the fermentative process goes on, for

* Rush's Inquiries.

want of bile, with an extrication of air, which gives rise to distressing colic and borborygmi."*

Having thus, I flatter myself, satisfactorily accounted for the atony of the stomach and whole line of digestive organs, there remains no difficulty of solving the problem: why do sudden transitions from heat to cold, or the application of cold water to the feet, produce colic under certain circumstances? *Sympathy and association* have usually been resorted to in order to *explain* this phenomenon. But this is a mode of philosophising which is, I confess, beyond the reach of my humble comprehension. The long continued disordered function of the digestive organs renders them the weaker part, and consequently the seat of disease when any adequate degree of inequilibrium of excitement takes place in the system. Spasms and constipation occur without any mucous or sanguineous effusion, because the mesenteric vessels are not in that state of plethora which favours the production of dysenteric symptoms. Where from hereditary or acquired predisposition, the lungs are most liable to disease, pneumonia, or phthisis pulmonalis will follow the same exciting causes.

These remarks will apply with equal propriety to the colica pictonum of writers; a disease which has been much too generally associated with *lead* as its cause. Since a disease somewhat similar (mill-reck) has been observed to prevail among those who are employed in melting and preparing lead, and among those in the neighbourhood of lead furnaces, almost every mind has been directed with a kind of magic influence toward lead, as the cause of this disease and similar affections. Adulterated wine and cider, and apple-butter kept in glazed earthen vessels, have each in their turn been proscribed for their supposed agency in the production of this disease in consequence of the quantity of lead they contain, or are *supposed* to contain. The *colic of Madrid* (which bears a striking resemblance to this disease,) has

* Johnson on Tropical Climates—Eastern Hemisphere.

been referred to the same cause. But the unpleasant effects resulting from the ingurgitation of these supposed vehicles of lead may be accounted for upon a different principle, as I shall endeavour to illustrate, after proving that the diseases in question may, and very often do, prevail in situations where this *paralysing metal* can have no agency in their production.

D. J. Larrey, a gentleman no less distinguished for his scientific acquirements and talent for accurate observation, than for his indefatigable industry and surgical abilities, in his *Memoirs of Military Surgery*,* has afforded ample proof that the colic of Madrid is produced by great and sudden ærial vicissitudes, and not by lead. To introduce the arguments of this author would be inconsistent with the limits of this inquiry; but those who desire information on the subject, will find their labour well rewarded by adverting to the "Memoir" itself.

That the dry belly-ache mentioned by Sydenham was produced by "occult causes existing in the atmosphere," is sufficiently manifest from the extract which has already been introduced from that author.

Dr. William Hillary, in his observations on the diseases of Barbadoes, speaking of the dry belly-ache, says: "Those who have their dry constitutions, and are much emaciated by *excessive perspiration and sweating*, or labour under great anxiety and affliction of mind, or are *immoderate drinkers of spirituous liquors*, especially such as are fiery and new, or those who are very irregular in the use of the *six non-naturals*, and especially those who live in America and the West-India islands, are most subject to this cruel disease."†

What more predisposes to biliary derangements, than "excessive perspiration and sweating," while the hepatic vessels undergo a corresponding increase of action? And

* Hall's Translation, vol. ii. p. 225.

† Rush's Hillary, p. 132.

what is more apt to promote those derangements, than the ingurgitation of spirituous liquors, or great irregularity in the use of the "six non-naturals?"

In a foot-note to the same work,* Dr. Rush says: "It (the dry gripes) was a common disease in Philadelphia between the years 1660 and 1670. It is now seldom to be met with except in painters. Its rare occurrence has been ascribed to the disuse of punch, and of late and hearty suppers; to the general use of flannel next to the skin; and to the abolition of porches, which afforded a temptation to our citizens to expose themselves for several hours, in a state of inactivity, to *damp evening air*."

Lind informs us† that "the dry belly-ache, though one of the most painful and excruciating distempers, seldom proves mortal, unless it has been occasioned by *sleeping on the ground exposed to night air*, or by drinking immoderate quantities of newly distilled spirits, which are too frequently made use of in the beginning of the disease."

Dr. Robert Thomas, in his *Modern Practice of Physic*, says the dry belly-ache "is occasioned by long continued costiveness; by an accumulation of acrid bile; by cold applied to the extremities, or to the belly itself; by a free use of unripe fruits; by great irregularity in the mode of living; by acrid food or drink, such as sour wines or cider; and by the inhalation of vapours arising from a decomposition of lead; or frequently handling some of its chemical preparations; hence painters and glaziers are frequently attacked by it. From the disease occurring frequently in Devonshire and other cider countries, it has generally been supposed to arise from an impregnation of lead received into the stomach; but as the colica pictonum is a very prevalent disease in the West Indies likewise, where no cider is made, and where there is only a very small quantity of lead in the

* Rush's *Hillary*, p. 134.

† Lind on *Hot Climates*.

mills employed to extract the juice of the sugar-canes, this cause cannot be so general a one as has been imagined."

To multiply authorities in support of the position that colica pictonum or dry belly-ache is frequently produced independent of the agency of lead, would be an useless intrusion on the time of the reader. The assumption that lead is materially concerned in the production of this disease, appears somewhat gratuitous; and its validity, to me, seems extremely questionable. I am supported in this opinion, not only by the fact that the disease very frequently occurs where lead cannot possibly be supposed to have any agency in its production, but by the additional circumstance, that lead is often extensively used as a medicine without any such effects following its exhibition. The acetite of lead has, long since, been used as a remedy in dysentery, where the bowels are in a peculiarly irritable state; and where astringents are admissible in this disease, it promises to be useful. Professor Hall, of Baltimore,* used this article as a remedy in intermitting fever with success, and without any unpleasant effects; and I have used it in cases of menorrhagia and hæmoptysis, in frequently repeated doses, without any intestinal irritation, or other unpleasant symptoms resulting from it. In these last affections it is a very popular remedy in this section of the Union, and I have never heard of colic resulting from its administration. Like all other active medicines, *this* may produce unpleasant consequences when taken in excessive quantities: but admitting it produces colic under these circumstances, have we any better reason for ascribing every case of obstinate colic to this metal, than we have for ascribing every case of violent emesis to ipecacuanha, or diarrhœa to jalap? But it has recently been supposed that the acetite of lead is a harmless preparation, while the white oxide is peculiarly pernicious; hence it has been conjectured that vinegar may be useful in colica pictonum. Before I can admit this position, and the rea-

* Medical and Philosophical Lycæum, p. 388.

sonings founded on it, I must be better acquainted with the peculiar affinity of the stomach for this metal. The white oxide of lead is supposed to produce its deleterious effects in consequence of its vapours being inhaled into the lungs in the act of respiration; and if this can be admitted as sound doctrine, I am much at a loss to know how it thence enters the circulation, and becomes subsequently deposited in the stomach, there to undergo a chemical process in combination with vinegar.

The symptoms of colica pictonum bear a striking resemblance of those of the bilious colic of this country, if we except the palsy of the extremities, a symptom by no means common in the latter complaint. The absence of this symptom may probably be ascribed to difference of constitutional predisposition; to the rare use of balsamic and stimulating remedies; and to the free use of the lancet. The symptoms of the two complaints bearing so striking a coincidence, the above extracts and remarks, I presume, will be excusable as illustrative of the identity of causes.

Acid and acescent articles of diet, cider, raw fruit, apple-butter,* sudden transitions from heat to cold, and the application of cold water to the feet or some other part unaccustomed to it, when the perspiratory process is going on freely, have all been enumerated among the causes of bilious colic, in this section of the union. The two latter, the *modus operandi* of which has already been explained, may be considered as the principal *exciting causes* of this complaint, when a predisposition exists from the operation of the remote causes mentioned in a former part of this inquiry. That the remaining substances may also act as *exciting causes* of this disease, I am not disposed to deny; but their agency in its production bears no proportion to that which has been ascribed to them. From much attentive observation, I am perfectly satisfied that a limited indulgence in

* Apple-butter is made by boiling sliced apples in new cider, until the apples become perfectly soft, forming with the cider a thin jelly.

these articles during a state of health, is attended with no inconvenience: on the contrary, I view them as beneficial. But "where the stomach and intestines are *already* in an irritable state, from irregular or vitiated secretions of bile, they certainly tend to increase that irritability," and consequently may operate as exciting causes of the disease in question, as well as of dysentery.

These views of the subjects under consideration, are offered to my professional brethren, not from any love of novelty and speculation, but under a firm conviction that they are calculated to lead to important practical results. If future experience and observation should not confirm the opinions here advanced, I shall console myself under the reflection, that "to err is human."

A few remarks relative to the curative plan which I pursued, shall conclude the present inquiry. Having already endeavoured to prove that bilious colic and colica pictorum are but different grades of the same disease, my remarks on this part of the subject, I consider equally applicable to both, as they present themselves in this country. In reviewing what has been said by former writers, with regard to the treatment of this affection, I find a deplorable discrepancy of opinion, which is well calculated to embarrass the young practitioner. This variety of opinion could only arise from our defective knowledge of the ætiology and pathology of the complaint; a circumstance which, I trust, will be received as a sufficient apology for the time which I have consumed in the investigation of those parts of the subject.

Emetics. When requested to prescribe for a patient afflicted with this disease, I generally commence my curative plan by administering an emetic. This is indicated by the spontaneous efforts to vomit, as well as by the quantity of vitiated bile which is frequently discharged. This discharge of bile has given currency to an erroneous opinion, that this affection is characterized by a redundancy of the biliary secretion. If we reflect on the quantity of bile which is

secreted in a healthy individual in the twenty-four hours, and the obstruction to its exit, from the constipated state of the bowels in this disease, we can have no difficulty in accounting for the quantity discharged by the mouth, although there be a paucity in the secretion. The stomach being in an irritable state, and the bowels obstinately constipated, what bile is secreted finds its way into the stomach, either spontaneously, or by the first efforts at vomiting. The spontaneous efforts to vomit, though frequent, are insufficient to remove all vitiated matter from the *primæ viæ*, and hence the necessity of emetics. The articles from this class of medicines are calculated to be more extensively useful than has been generally imagined. They not only promote a free discharge of all offending matter from the *primæ viæ*, but by their nauseating and relaxing effects, they produce a temporary suspension of the spasmodic action of the intestines; prepare the stomach for the reception and retention of cathartics; rouse the torpid action of the hepatic and cutaneous vessels; and promote an equilibrium of excitement in the system. The mechanical effects of their operation may also have a tendency to emulge the biliary ducts. In some obstinate cases, where cathartics do not operate for several days, and where spontaneous vomiting of vitiated bile recurs, with an irritability of stomach which causes the rejection of cathartics, an emetic may be repeated with advantage, provided inflammation have been guarded against by blood-letting. If administered in divided doses so as to produce considerable nausea before full vomiting takes place in these cases, the constipation will frequently yield without any other medicine, and the operation of cathartics is uniformly facilitated by this practice.

I have used different articles from the class *emetica*, and am fully persuaded that a preference may with propriety be given to some, even of those in most common use. The disgusting taste and smell of ipecacuanha, causes it to be frequently rejected too soon, where so great an inclination to vomit already exists; and the *tart. Ant. et potassæ* some-

times leaves a distressing nausea and gastric irritability, which cause much delay before cathartics can be retained. By combining the two, these inconveniences are sometimes counteracted: but after much observation, I am induced to give a decided preference to a combination of calomel and emetic tartar, in doses of sixteen or twenty grains of the former with two grains of the latter, in the form of pill. This will frequently lie in the stomach from fifteen to thirty or forty minutes, attended with some degree of nausea, before it operates; after which it produces copious emesis. It also appears to have a peculiarly favourable effect in preparing the intestines for the speedy operation of cathartics; an effect which may doubtless be ascribed to the calomel. I have been particularly impressed with the importance of emetics in this disease, by comparing the result of those cases in which they were resorted to, with others in which they were omitted.

Cathartics. The importance of this class of remedies in the disease under consideration, is sufficiently manifest from the universal adoption of some of its numerous articles. The advocates of the opiate and antispasmodic plan of treatment, all consider the evacuation of the contents of the alimentary canal as absolutely necessary to the cure of this complaint.

Notwithstanding the obstinate constipation, and the imperious demand for cathartics, the inefficiency of the more drastic articles has been generally observed; and after sufficient trials, I have been induced to abandon their use almost entirely. In about three hours from the time an emetic is administered, the stomach will be sufficiently composed for the reception of a cathartic. If the emetic contained no calomel, I give from sixteen to twenty grains of this substance, for my first cathartic. As this alone rarely operates, I provide the patient with other articles, with a view of producing a full cathartic effect. For this purpose, sulph. sodæ, sulph. magnesiae, manna, fol. sennæ, and ol. ricini, may be classed among the most efficacious articles.

Two ounces of either of these salts, or of manna, with an eighth or a fourth of an ounce of senna leaves, infused in near a pint of boiling water, form my usual proportion for four doses. One of these I advise to be taken in two hours after the calomel, (or where calomel constituted part of the emetic, in three hours from the time it was taken,) and repeated every two hours, until the desired effect is produced. These draughts are better retained when a few cardamom or anise seeds are added previous to the infusion. Where the *ol. ricini* is preferred, it may be given in doses of half an ounce at the above periods. The *ol. ricini* may be alternated with either of the infusions, with advantage. In this way less aversion is excited than where one preparation is continued alone. I prefer giving these articles in the doses here mentioned, and repeating them frequently, because larger quantities are apt to be rejected as soon as swallowed.

Although manna does not appear to be so active as the neutral salts just mentioned, I cannot agree with those who suppose it to be altogether inactive. Although it may have but little effect in a healthy state of the digestive organs and chylopoietic vessels, it certainly possesses considerable powers under different circumstances. It will, moreover, often be retained in the stomach, when the salts are rejected. Crude rhubarb may be contused and infused with the manna and senna with advantage where the stomach will retain it.

By the simple plan here detailed, aided by blood-letting where inflammatory symptoms occur, the constipation and other unpleasant symptoms will frequently be overcome in twenty-four or forty-eight hours. But to this as a general rule there are, unfortunately, too many exceptions. Notwithstanding the utmost attention, the constipation will not unfrequently continue for three or four days, and in some instances for a much longer period; sometimes from the obstinacy of the constipation alone; but more frequently from a degree of gastric irritability which causes the rejection of our remedies before they can produce the desired effect.

The excruciating torture of the patient, and the reputation of the physician, equally demand every remedial exertion. Opium, the lancet, fomentations, epispastics, and enemata, are all resorted to without that immediate relief which is desirable. I have tried opium, both alone and combined with calomel, without witnessing those pleasing effects which I anticipated in consequence of reading the reports of others; and I have now almost entirely abandoned its use, for reasons which shall be mentioned presently.

In those obstinate cases where the gastric irritability is such as to cause a rejection of almost every medicine administered, I rely almost exclusively upon calomel as an internal remedy. I have found it decidedly superior to opium, a drug which has been so generally recommended, and from which I anticipated so much benefit, that it required many instances of ocular demonstration of its inefficacy, before I could be induced to lay it aside. Where inflammatory action is prevented or subdued by the liberal use of the lancet and epispastics, calomel combined with gum arabic will be retained, when every other cathartic will be rejected; and succeeds better in quieting the gastric irritability, than the supposed specific, opium. I generally prescribe ten grains of each, formed into a paste by the addition of a few drops of hot water, and repeat the dose every two or three hours until the stomach is somewhat composed. After a few doses of this, the cold expressed castor oil will generally be retained; and by alternating these, in conjunction with venesection, epispastics, and the occasional use of enemata, the constipation will soon give way. Where patients have a great aversion to unpalatable infusions and *ol. ricini*, I have frequently given pills composed of equal proportions of jalap and calomel, or rhubarb and calomel, with the happiest effects.

This liberal use of mercury has been objected to, in consequence of its tendency to produce ptyalism. But so far from this circumstance affording grounds for proscription, it is the very one calculated to prove the superiority of this

"Sampson of the *Materia Medica*" over all other remedies, in the treatment of this disease. As soon as ptyalism is produced, an amelioration of pain is experienced; the stomach becomes so far composed, that ol. ricini or neutral salts and senna will be retained; the constipation is soon removed; and the patient in a convalescent state. I have so often witnessed these pleasing effects that I have had frequent occasion to regret the great difficulty of producing the mercurial action in the system where the disease has continued several days before the attempt is made. In some obstinate cases I have given from eight to ten grains of calomel every two or three hours, for several days, without any of its specific effects becoming manifest in the system. Under different circumstances, the same individuals were salivated with no extraordinary difficulty. Ptyalism rarely takes place to any excessive degree, because, when once produced, the further use of mercury is unnecessary, inasmuch as the baffling symptoms speedily vanish.

Enemata are useful auxiliaries, and should always be resorted to where cathartics do not operate on the first or second day. I have witnessed the most beneficial effects from these, where the fluid was thrown up the rectum until it was involuntarily rejected. This mode of administering them, however, is sometimes productive of some degree of inconvenience to the operator, some practical instances of which I have witnessed.

Opium. This narcotic has obtained so much celebrity for its supposed efficacy in the disease under consideration, that any objections urged against it at this time may be stigmatized as the vain and visionary offspring of prejudice; yet candour compels me to state, that after having been much prepossessed in its favour, and after having used it extensively, I have been induced to lay it almost entirely aside, as something worse than useless in this complaint. It frequently fails to check the gastric irritability and spasms of the intestines, even when given in large doses, and when it produces this effect, the respite is but transitory; it too of-

ten retards the operation of cathartics; and when frequently repeated, it produces a feverish state of the system, and consequently a necessity for frequently repeated bleedings to prevent inflammation, which leave the patient extremely exhausted after the temporary excitement from the opium has subsided. These remarks are, in some degree, supported by the observations of Cullen and Sydenham, though with them *spasm* was such a prominent object of attention, that the association of *antispasmodics* and colic could not be dissolved, particularly by the latter gentleman.

Formerly I was much in the habit of giving opium in combination with calomel, but by comparing results, I am induced to recommend calomel, either alone or combined with gum arabic, conscious of its great superiority.

Epispastics are useful adjuvants. When applied to the extremities or epigastric region, they tend to quiet the gastric irritability, and relieve that distressing pain of the lower extremities, which so frequently accompanies this disease. They, moreover, tend to equalize the circulation, and thus promote the operation of cathartics. I have repeated them with advantage; but they should be preceded by the liberal use of the lancet. Where these two remedies are properly resorted to, no danger from inflammation need be apprehended.

Antacids. These seem to be indicated by the symptoms of acidity in the stomach; but I have found no benefit from any medicine from this class, except calcined magnesia. This medicine, while it neutralizes the excessive acid in the stomach, has its cathartic powers increased, and may be alternated with other evacuants with advantage in many cases.

The warm bath may be useful in a hospital, but it is illy adapted to country practice, from its inconvenience. Fomentations to the abdomen, with flannels wrung out of hot water, when repeated every fifteen or twenty minutes, for several hours, are sometimes useful in mitigating spasm and promoting the operation of cathartics.

The foregoing measures must be persevered in until the bowels are copiously and repeatedly evacuated, and the pain removed; but our efforts must not stop here, as there is no disease with which I am acquainted, more apt to return than the one under consideration. Irregularity of diet, exposure to cold or damp air, a copious draught of cold water, and inattention to the bowels, have each been followed by relapses of this disease. The diet should consist of such articles as are light, nourishing, and of easy digestion.* Crackers, arrow-root, sago, soft toast, &c. with tea, coffee, or chocolate, should constitute the principal diet during the first days of convalescence. Where great exhaustion prevails, panada, with a small quantity of cogniac, may be admitted; but, in the generality of cases, the diffusible stimuli are unnecessary, and even prejudicial. Beef-steak and tender fowl in moderate quantities, will aid in restoring the strength of the patient; but they are rarely admissible in less than twenty-four or forty-eight hours after relief from acute symptoms is obtained. Corn meal gruel and barley water are also useful; and corn mush, well boiled and put into milk perfectly sweet, so as to make the whole moderately warm, agrees well with convalescents from this disease.

Fat and gross, as well as all acid and acescent articles of diet, should be carefully avoided. The irritable and debilitated state of the digestive organs will not admit of the use of these articles with impunity. My observation does not enable me to sanction the opinion of Dr. James Lind, that those who are subject to *biliary colics* will derive benefit from taking "twenty or thirty drops of elixir vitrioli twice or thrice a day, upon an empty stomach.

Exposure to atmospheric vicissitudes should be carefully avoided: flannel worn next the skin will be an useful auxiliary in preventing the ill effects of atmospheric impressions. The feet should be carefully defended from cold and moisture. Water should not be drank for the first three or four

days of convalescence, without its temperature is previously raised by extinguishing an ignited coal in it.

During the violence of the symptoms of this disease, weak coffee, with little or no sugar in it, domestic or table tea, barley water, and chicken water, may be taken to mitigate the distressing thirst which is present; but if drank copiously they are apt to prove injurious by exciting vomiting.

Irregularity of the bowels must be carefully guarded against by the daily use of laxative pills or castor oil. As the latter is generally objected to in consequence of its unpalatableness, I have used the former most extensively. Venetian soap and jalap, or soap and aloes, answer a very good purpose. I am much pleased with the effects of asa-fœtida and aloes. My usual proportions are ʒi. of each, combined and made into 24 pills, two of which are recommended once or twice a day according to the effects produced, the object being to procure one or two evacuations per anum, daily. Where these are not sufficiently active, a few grains of gamboge may be added with advantage. These latter pills create an appetite, promote digestion, and invigorate the system. Tincture of rhubarb with cardamom is also serviceable.

In conclusion of this subject, I may remark, that I never witnessed a relapse in any person during the continuance of a salivation which had been excited for the removal of the disease.

The limits of this paper would not admit of my offering any remarks relative to some other remedies, such as crude mercury, dashing cold water over the abdomen, &c. which have been recommended in cases of obstinate constipation: suffice it to say, I have never found it necessary to use them.

By the experienced practitioner my details may be deemed tediously minute; but the student of medicine, I presume, will require no apology.

ART. III. *Observations on Milk Sickness.* By A. M'CALL,
M. D. of Nashville, Tennessee.

THIS essay is an attempt to sustain all the essential opinions and facts stated in a thesis, which I submitted to the inspection of the Faculty at Philadelphia.

The dissertation alluded to, was designed to give the distinctive outlines of a disease called Milk sickness, in the western parts of the United States.

Extracts from that thesis were published, without my direction, in Professor Chapman's Med. and Phys. Journal. The learned editor, in his remarks on these extracts, "*thinks*" the existence of the disease to which they refer, very improbable. I was aware when I wrote that paper, that it would appear in a very questionable shape to the strenuous supporters of the sympathetic doctrine. I was also convinced that my thesis would not necessarily depart from the sound principles of physiology and pathology, if it were at variance with the dogmas of the zealots of sympathy. I then believed every friend to medical science would soon unite in curtailing the present wild extent of the sympathetic theory, before injured reason, too violently reacting, should overwhelm its beauties along with its deformities.

Medical theory is truly useful, only when its practical results are beneficial. To judge correctly of these results, we must have recourse to the phenomena presented to clinical observers. It is by inductive reasoning thus experimentally obtained, that we can be prepared to detect the fallacy of each protean medical theory, whose shadowy being might long elude any other species of investigation.

With the view of throwing my mite into this department of our profession, I shall describe the disease under consideration, as it actually exists.

Through the kindness of Dr. Sharpe I am enabled to de-

tail a number of cases as they have occurred in his practice. Some of the information I offer, is derived from respectable citizens, who never suspected that it was necessary to enter into scholastic disputations, either to prove or disprove the existence of a self-evident fact.

As yet the disease we are to consider, has never graced any arbitrary table of nosology.

The sick stomach and puking fever, milk sick and swamp sick, the tires, slows, and stiff joints, are terms by which the disease has been designated; all strongly expressing some diagnostic feature of this distressing affection.

Having premised these observations, our subject shall be treated in the manner following :

1. Milk sickness among the inferior animals.
2. The same disease in the human family.
3. Topographical remarks.
4. Conjectures on its origin, and
5. Opinions on the structural and functional derangement produced, constituting ipse morbus.

Milk sickness originally appears amongst the inferior animals, in all, or most of its distinguishing characteristics. I will therefore first describe it in that state.

Horned cattle, horses, deer and sheep, are often the original subjects of the complaint.

If a milk cow is about to be severely affected, she gives evidence of great languor. If she can gratify her thirst for water, it hastens the approach of the constantly attending symptoms, universal tremors, and violent constipation of the intestines. Her head is tossed from side to side in agony, and if remaining long in one posture, the muscles cannot be acted on, so as to change that position. All the muscles have a peculiar rigidity. The abdominal muscles are much contracted in the more advanced stages of the complaint, the body presenting a meagre aspect.

If milk be now drawn, it emits a peculiar odour, well known to those conversant with such milk. It is said not to foam so much as good milk, when flowing from the dug into a

vessel. The cream has a greenish hue, and the butter made from it is highly pernicious. If the calf suck this milk it trembles, and often quickly falls and dies. By abstracting the milk, the animal is partially relieved. Her breathing is laborious, and very offensive to the bystander, if inhaled. On dissection the stench arising from the internal parts is almost insupportable. The several apartments of the stomach, and parts of the intestines are gangrenous, or in a sphacelous state. Their contents have the appearance of being dried or parched.

Other animals labouring under the disease offer symptoms very similar to those described. And a happy thing it were, if the disease always assumed, in these animals, this aggravated form. The human family could then be thrown upon their guard. It often puts on a much more insidious aspect. The first suspicion of the cow being diseased, is excited by the nausea at stomach of those who for some days may have used her milk. Perhaps the calf is by this time disordered. If under these circumstances the milk be regularly drawn, the cow may exhibit no marks of disease, eating and drinking as usual. But should she be made to undergo severe exercise, the complaint will assume its customary character, and perhaps terminate in death, or a slow recovery of six or twelve months.

Indeed, it is stated, that animals once under the influence of this supposed poison, never are so completely relieved as not to feel its effects on any future long continued muscular exertion.

At all stages of the disease, ardent spirits and spirits of turpentine, large doses of allum and charcoal, or strong decoction of peach-tree leaves, are attended with salutary effects when freely administered. After the intestinal canal is freely purged, the danger is slight with proper care.

In Sequachee valley I saw sheep, injured by this supposed poison, vomiting without much apparent effort, and purging without having taken any medicine. The owner, Billingsly, Esq. thought if his cattle and sheep had remain-

ed in the hills, they would not have sickened. The fatigue of driving home, and then drinking water, had produced the active form of the disease.

In the dormant state of the complaint, the milk is not less deleterious than when it has taken on its more distinctive character.

That dogs, cats, buzzards, turkeys, chickens, and crows, die by eating the flesh of animals that perished under this disease, can be established by the most indisputable testimony. Capt. Mills and others informed me, they had seen buzzards unable to fly from dead carcasses; and that on Hickerson's fork of Goose creek, sixty or seventy were found dead, at one time, near the water.

Benj. Seawell authorized me to state that he had lost seventy-five or one hundred head of cattle and horses, in the last twenty years, by the poison which produces milk sickness. At one time he drove from the hills, about two miles from his farm, fourteen steers, of which seven sickened and died, at the first water they crossed; two only could be driven home, and they also afterwards died. Mr. Seawell had seen dogs unable to get home after eating poisonous flesh. He also stated that one of his neighbours, when removing his family to a distant part of the country, had seven horses to die, on the road, with the common symptoms; although these horses were apparently well when setting off.

Mr. E. Henry permitted me to state, that whilst fox-hunting, he found two of his dogs at a carcase; the same dogs that morning pursued a fox about half a mile, came to water, drank, and died immediately.

Mrs. B. informed me that when her husband lay in his last illness, her milk cows were neglected, and suffered to run out of the pasture. Mrs. B. having once had the milk sickness, ordered some of the milk to be given to a pig to try its quality. The servant, believing the milk to be good, took some of the cream; was immediately attacked, but recovered. At the sale of her husband's property, soon after-

wards, she purchased a mare known to be affected by this poison, and this mare soon died. It being inconvenient to burn or bury the carcase, as is customary, a pen of wood was placed around it. Into this inclosure, none but small animals could find a passage; some days after, one raccoon and two opossums were found dead by the carcase.

I could give a multiplicity of cases in support of the above, but these will suffice on a subject which will not admit of dispute in this country.

Not long since I visited Goose creek, with the view of getting information on this disease. Unwilling that the facts connected with milk sickness in the human family should rest on my own authority alone, I applied to Dr. Sharpe, an excellent practitioner in that part of the country, to give me an account of some cases which had fallen under his view.

Without a personal acquaintance, the doctor has complied with my request. His cases are inserted at full length, and convey so correct a view of the disease, that I shall not be under the necessity of adding much to that part of our subject. So far as I am acquainted with milk sickness in the human family, it can be invariably traced to taking into the stomach the milk, butter, or flesh of animals that had laboured under the same disease. There is a remarkable coincidence of symptoms presented by the operation of this peculiar poison, upon man, and the lower species of animals.

The violence of an attack is modified, by the quantity and quality of milk, butter, or flesh taken into the stomach, and the length of time it is retained. The peculiar habits and constitution of each individual, is also to be taken into consideration. Drunkards and persons who have been several times under the influence of this poison, are least liable to be affected by it. Adults are more severely attacked, in general, than children, and have a more tardy convalescence.

I will here insert Dr. Sharp's cases.

Hartsville, Sumner county, 24th November, 1822.

SIR—I have received your letters of the 2d and 14th inst. requiring me to give an account of the symptoms and treatment of the disease commonly called milk sickness, as it exists within the bounds of my practice. I regret I am not able to do this subject that justice which its importance, and the safety and happiness of a considerable number of the inhabitants of this county, demand. However, as it is my opinion, that this disease is *sui generis*; and that the milk or flesh of animals afflicted by this complaint, does produce a similar disease, in other animals using such milk or flesh; and as I am desirous this subject should be fairly and impartially examined, by men of acknowledged talent, experience and science, I enclose a few cases of both those successfully and unsuccessfully treated. The inhabitants in this section of country, have long been in the habit of keeping up such stock, as they intended using for flesh diet, in lots made for the purpose. So that I cannot now give a well marked case produced in the human being, by eating the flesh of poisoned animals. I have however seen cases, I believed generated in that way. I know many cattle and horses die quite fat, and that a vast number of hogs and dogs die, soon after eating the flesh of such animals, with a disease similar to that under which the first named animals perished.

There never has been an instance of this complaint in any species of stock, whilst confined to an old well cultivated pasture: nor have any of the citizens been injured by using the milk or flesh of such stock. I have seen the disease make its appearance in families, shortly after adding a piece of woodland to the old lots, and disappear after separating the timbered land from their old lots. As it respects the remote cause of this complaint, I am not prepared to give such an opinion as should be relied on; although I am persuaded, it must be some of the mineral poisons.

If my statements are of any service, you are welcome to

use them as you think best. I stand pledged, that they are substantially correct.

CASES 1 and 2. Mr. and Mrs. M'Neilly were taken, the one on the 2d, and the other on the 4th day of July 1814. The symptoms of both cases were the same; I will give them together. A burning sensation, at the stomach, was first complained of. It was moderate for a day or two, and not attended with any vomiting or pain. On the third day after their respective attacks, each complained of severe burning in the stomach, and vomited frequently. Obstinate constipation of the bowels attended both cases. The pulse was small, threaded and a little accelerated; the heat of the extremities considerably below the common temperature. The tongue was covered with white tough phlegm, and was tremulous. Restlessness and great anxiety prevailed in the early stage of the complaint. A constant and ungovernable thirst for water was always present, and when given, only allayed the thirst for a few moments, being quickly ejected. There was no pain in the region of the liver, the spine, or the head. The stomach and bowels seemed to be the seat of disease. These symptoms continued to increase, for about twenty-four hours, after each began to vomit, with occasional hiccuping. Then the vomiting and pain began to subside, and hiccup became frequent with great prostration of strength. Inspiration was performed slowly, and with great difficulty; and as they became less restless, and anxiety made its disappearance, stupor prevailed in the same ratio, till its subjects were rendered completely insensible. The pulse intermitted, the eyes became fixed, and the palpebra open. With these symptoms death closed the scene, in about sixty hours after each began to vomit. They were freely bled, and their stomachs attempted to be allayed by mucilaginous drinks and anodynes; also by the application of a blister to the epigastric region. Injections of the oily kind, and the more drastic, were repeatedly used with no good effect;

blisters were also applied to the extremities, with the view to equalize circulation.

I lost four or five other patients, the same year, who had contracted their disease by using vitiated milk. There were some cases recovered, under the same plan of practice.

CASE 3. Miss Betsy Reid was attacked 19th May, 1816, with burning at the stomach, attended with slight pain. She vomited frequently, the thirst was constant and the pulse small, threaded, and frequent. She was restless, with a singular cast of anxiety in her countenance. In the early stage of her attack the bowels were constipated. She complained of little except the burning sensation at the stomach, which was momentarily relieved by the reception of mild fluids. An alarming prostration of the system soon came on. She was bled early, but did not lose much blood in consequence of a very languid arterial action. Oily purgatives and cathartic enemata were administered without producing an evacuation. The region of the stomach and the extremities were blistered without mitigating the symptoms. About thirty-six hours after she began to puke, the vomiting and burning ceased suddenly. The ease she experienced for a few hours, was but the precursor of dissolution. The difficulty of breathing showed the delusive prospect of a recovery. She groaned awfully, as respiration was performed, without being sensible of it, till death closed her sufferings. The course of the disease was only three days from the time she began to puke; though she had been unwell for some days before.

CASE 4. Mr. John Reid, was attacked 20th May, 1816, with slight uneasiness at his stomach, which continued to increase till the 23d, when I prescribed for him. All the symptoms of the early period of Miss Reid's case were present to an alarming degree, with cold extremities and hiccup. All the remedies used in Miss Reid's case were resorted to, except bleeding, without affording relief. I tried on the 25th, the neutral salts to considerable extent, but

they were rejected from the stomach. I then determined on giving calomel, merely on account of its weight. I commenced giving 10 grs. every fourth hour, till he had taken three portions. I then gave 20 grs. for twelve hours more. The dose was then increased to 40 grs., repeated at the same intervals, still using cathartic injections. After giving the last named dose of calomel four or five times, he began to evacuate small quantities of hardened fæces. The burning and pain began to subside; continued the same dose of calomel one day longer, when his bowels were opened freely, and the vomiting entirely ceased; a little burning still remained. A solution of salts in an infusion of senna was then substituted for the calomel, and a gentle catharsis was kept up for some days. The ptyalism was slight—he recovered speedily.

CASE. 5. Mrs. Jones was taken on the 26th April, 1818, with slight burning and some pain in the epigastric region, which increased for three days, when these symptoms grew very troublesome. She often vomited, and had regular alvine discharges for two or three days more. Her bowels then became obstinately costive. Her pulse was more open and less chorded than is common in this complaint. The extremities were mostly below the common temperature. She was restless, but as the disease advanced, stupor came on. Great debility attended.

Permit me here to observe, that in all the cases which have come under my care, the matter thrown from the stomach was nearly transparent, sometimes a little bilious, generally tasteless, and not acrid, but having a peculiar smell, a correct description of which I cannot give. I sometimes thought it faintly resembled new milk, taken from cows that have recently fed on young vegetation or buds. It has also brought to my recollection the smell of young bruised garlic. This, certainly, is one of the most prominent diagnostics of the disease.

I was called to visit Mrs. Jones on the third day after vomiting ensued. I bled her, and commenced giving sub.

urias hydrar. 10 grs. every fourth hour, using enemata in the mean time. In about twenty-four hours, she passed dark scybalous fæces mixed with grumous matter. After continuing the calomel a day longer, salts and senna were substituted. Her convalescence was as speedy as could be expected. I was early convinced her sickness was produced by poisonous milk, and communicated my opinion to her husband, who did not think it was the case, as his milk cow was in good health. I prevailed with him to quit milking the cow. After a few days the cow sickened and died with the usual symptoms.

CASE 6. There have been a number of cases of the chronic kind of this disease. I give you the case of Mr. Marshall, who was taken ill, some time in the year 1819, with slight burning at the stomach, sometimes puking, which, at intervals, continued for some months. After a few weeks illness he showed evident signs of general debility, with slight and irregular exacerbations of fever. He was also troubled with trembling and difficulty of breathing, after even light exercise.

There was a general rigidity of the whole system, particularly of the joints. His bowels were often constipated, and giddiness of the head was commonly present (which symptom also belongs to the acute form of this disease); his countenance was of a greenish sallow hue, and his eyes seemed languid. He was always dull and inanimate in the performance of whatever he had to do, and his conversation was rather incoherent. These symptoms harassed him for several months. He took alkalies and saline cathartics, which scarcely ever failed to give relief. But a recurrence of the symptoms always took place, until he abstained from milk altogether; after which he was easily relieved by the above mentioned remedies.

I am disposed to believe this form of the disease is coeval with its cause. I am satisfied, cows giving milk may labour for months under the influence of this poison, without showing evident signs of it.

Young calves die with the usual symptoms, whilst their mothers appear in good health. The flesh of such calves will communicate a similar disease to other animals feeding on it. For the chronic form of this disease, the oily purgatives and sulphur have long been used with much benefit; as also the pure carbonate of potass, which greatly soothes the burning sensation at the stomach.

You know from what has been said, that the burning and pain, vomiting and thirst, restlessness and anxiety, cold extremities and accelerated somewhat threaded pulse; the constipated state of the bowels and the peculiar smell alluded to, taking into consideration the remote causes, are among the principal diagnostics of the disease. An opinion of its favourable or unfavourable termination, may be formed from the mildness or violence of the symptoms, and the effects which the remedies produce upon the system.

One remark I will here make, which is, that I never failed relieving my patient after opening the bowels early and freely.

I have selected these cases of old dates, merely because I had made memoranda of them for my own use, as they occurred in my practice.

There have been many such cases of more recent date. However, the citizens have been much more careful of their stock than formerly, and cases are consequently fewer in number.

The mode of treatment I pursue, is that laid down in the case of Mrs. Jones, with the addition of blistering, and varying the doses of medicine to suit circumstances. I find under this practice, I can save six out of nine of my patients; whereas, by the former method, I lost nearly all.

The disease occurs at any season of the year; but is most common during the months of March, April, May, September, October, and November.

Yours obediently,

M. D. L. F. SHARPE.

DR. A. M'CALL.

To give several cases, I had prepared, similar to those detailed by Dr. Sharpe, would be useless, even if the limits of this paper would permit.

I have several cases drawn up, which occurred in the state of North Carolina, between the years 1779 and 1800, but they differ in no material respect from those above cited.

I must not omit to mention, on major Martin's authority, that an infant of Mrs. M'Neilly's was taken from her breast, as soon as it was ascertained she had milk sickness; yet that child only survived its mother a few days, dying with the usual train of symptoms that attend such cases.

A case somewhat analogous is related in Coxe's Med. Museum, 3d vol., by S. T. Barstow.

"*May 27th*, 1806. Some time in the summer of 1801, the wife of Mr. Alfred Bremen, in the town of Baintrim, Luzerne county, Pennsylvania, was bitten by a rattlesnake. She was then in the fourth month of pregnancy. After some considerable degree of the common consequences of such an accident had occurred, she at length recovered. At the full period of gestation she was safely put to bed.

The child was apparently healthy; but immediately after allowing it to suck, it assumed the hues of a rattlesnake, swelled very much, and soon died. She then procured a puppy, which died in the course of two days with the same symptoms. A lamb was tried next; and in succession one puppy and three lambs shared the same fate. Another puppy was procured, which discovered but little of the symptoms and did not die.

Her convalescence from child-bed was as usual. In 1803 she had another child, and no disagreeable consequences resulted from the use of her milk."

In Overton county, Tennessee, I saw a child whose skin was discoloured with yellow and dark spots.

Its parents stated that, about one year previous, it was bitten by a rattlesnake; that a discoloration of the skin, similar to what it then had, took place soon after it was

bitten; and that these spots disappeared during the winter, and they supposed its health restored. But when the season of the year in which it was bitten approached, the skin again became discoloured, and the extremities œdematous.

The child died.

I will offer some topographical remarks on some of the districts in which milk sickness is found to prevail. The Goose creek tract of country, is on the north side of the Cumberland river. At the distance of ten or fifteen miles from the river a chain of highland runs, dividing the waters of Cumberland from those of Barren river, in Kentucky. From this highland, appending ridges set off; those running south divide the several branches of Goose creek towards their sources. On these ridges and along their bases animals contract disease. The chain passing between the upper and middle forks of Goose creek, is most remarkable for the poison.

This ridge rises in hills, to the height of two or three hundred feet above the level of the river.

Of these hills the Millstone Knob is most worthy of notice. From its summit a country, beautifully variegated with hills and dales, presents itself in a state of high cultivation.

The millstone quarry, whence it takes its name, is about two-thirds of the way from the base to the summit. Viewing the face of the quarry, it will be seen, only a few feet of earth covers a flaky bed of slate, which, to the depth of five or ten feet, rests on the millstone rock.

When hot iron bands are applied round these millstones, an oily substance exudes.

I could find no mineral substance on this hill, except some coarse pyrites.

The general face of the country presents no striking peculiarities.

Without giving a minute description, I will mention many other places, where milk sickness is met with. In Stokes

county, North Carolina, I have witnessed the effects of this disease.

In the flat lands on both margins of the Yadkin river, within a mile of the place of my nativity, it annually showed its devastating influence. And accordingly among my earliest recollections, the river Sick, as it was there called, has its place. The cause of this sickness could there be always exterminated by cultivating the soil, as was amply proven in Poindexter's and Kerby's farms. Some ascribed it to the wild parsnip root; others to the spiders, with their webs, which were attached to the vegetables. On the little Yadkin river, where there were iron works, exhalations raised by the furnace, and subsiding on the neighbouring vegetables, was charged with being the remote cause. In the same state, it is met with in Burke, and some other counties. Also in some parts of Georgia and South Carolina. It is met with in the mountains and flat lands of Kentucky and north-western Virginia. In the plains of Indiana, of Missouri, of Illinois, of Michigan, and in many parts of Ohio.

The poison in the American plains of Missouri, is particularly virulent. In the state of Tennessee it is not confined to Goose creek.

In 1821, the legislature of this state passed an act, for fencing up certain coves of the Cumberland mountain, in Franklin, to prevent (as it reads) animals eating an unknown vegetable, thereby imparting to their flesh or milk qualities highly deleterious when taken as diet.

The provisions, in this act, binding overseers to keep up these fences and make gates, were very strict. I am informed the fence is in good repair at this time, twelve or fifteen miles along the base of the mountain. In Bedford county, in Smith county, on the waters of the French broad, on the waters of Clynch and Emery rivers, and at other places in the state of Tennessee, the disease occurs.

In Sequachee valley, Bledsoe county, it is very destructive to animals. Deer are often found dead, which if eaten, will produce sickness. Mr. Smith, clerk of one of the courts

in that county, and his wife, sickened and died, in consequence of eating poisoned milk. The slave, who milked the cows, assured the family the milk was poisonous; forming this opinion from its odour.

Sequachee valley is about sixty or seventy miles in length, and from five to fifteen in breadth, lying between the Cumberland mountain on one side, and its auxiliary chain, Walden's Ridge, on the other.

From these two lofty mountains, a fine prospect of woodland and well improved farms is offered—a little world, the garden of the hills, in calm and lowly seclusion.

The atmosphere, on these broad-based and majestically high mountains, is singularly pure and serene; and to the morning traveller, in summer, arriving at their margins, the foggy valley below will always, on first sight, raise the idea of a lengthened lake. But soon the green tree tops, still lower down, tell the delusion, as the imitative waves break before the rising sun. Looking on either hand, the wild, deep, broken precipices present a bold and striking picture of nature's long passed convulsions, which once rent apart these mountains. Slate, sandstone, and the secondary limestone, are found chiefly to compose the face of the hills. Some coarse pyrites may be seen; the water tastes as it does along the mountain in other places. Yet even in this peaceful valley, milk sick annoys animal life.

Not a neighbour, friend, or relative, falls under its mysterious power, without an excitement to know something more of this enemy to peace and health. Who that has any humanity, will longer withhold his aid in searching out its arcana?

I have no doubt the remote cause can be detected by proper research; though, perhaps, like many causes producing disease, its discovery might not be attended with much utility to the world.

As will be readily supposed, many conjectures have been made, concerning its probable cause. Many suppose one of the mineral poisons to be the remote agent. Mountainous dis-

tricts, where minerals abound, are sometimes the fruitful source of milk sickness. It is thought some mineral exhalation may subside on the vegetables, or be taken from the earth and transfused through the plant.

It is said, animals are not liable to become diseased, except when the dew is on the vegetation. Whence, perhaps, an inference is drawn, that the sun has the effect of carrying off this effluvia; or that, in the absence of the sun's heat and light, vegetable life has the power of decomposing and recombining the atmosphere; by which action, a poisonous substance is produced on the surface of the leaves, which could not have been generated in a vitiated air without vegetation, nor by vegetative powers, had not an impure atmosphere met their action. But it is said animals are least liable to contract the disease in very wet weather; and if that be untrue, it is possible, that the dew may suppress some sensible property, by which the animal instinct might be taught to avoid the plant.

It is not impossible that some two vegetables may excite certain morbid actions in the system, which, if used singly, would have no injurious effect. Were this poison a mineral exhalation, the state of the atmosphere would have more influence over it than has yet been discovered.

If it be a kind of marsh effluvia or "*mal aria*," variations of temperature and diversity of local situation, would surely present some phenomena by which such atmospheric poison could be reasonably assigned, as the offensive agent.

If it be *mal aria*, why should its production be sometimes confined to the healthiest sections of country, whilst snow and frost yet cover the ground?

If it be a mineral poison, why not appear in all places where quantities of metals, in various states of combination, may be found?

Or, if it be in the form of miasmatic or mineral exhalation, why not be wafted across a fence? Why not subside on the herbage and grass, in a pasture that has been well improved?

After an attentive examination for the probable remote cause of milk sickness, I am, for the present, decidedly of opinion, that it is of vegetable origin. I will, however, pursue the investigation of this matter, on better grounds than has heretofore been followed.

No post mortem examination of the human subject has yet been made.

The dissection of domestic animals has been only in those cases, in which death was produced by the disease, when the primary offending matter might be supposed to have underwent much change in the stomach.

The milk has not yet been properly analysed ; nor a sufficient number of experiments made with it. These several points, and others relating to the disease, I shall more particularly examine, and communicate the results of such inquiries to the medical public.

In conformity with the plan laid down, I will proceed to offer some pathological views on milk sickness.

It has seldom been denied, that certain substances taken into the stomach, cause some of the secretions to possess some of their sensible properties. Asparagus, rhubarb, cantharides, turpentine, balsams, and many other substances, impart to the secretion from the kidneys some of their sensible qualities.

Onions, garlic, some kinds of spirits, and different aromatic substances give to the secreted milk, peculiar properties.

Sulphur and nitrate of silver, when taken into the stomach, present sensible qualities through the pores of the skin, over the whole body. It is hard to believe there is any route more direct for these substances to arrive at the skin in every part, than through the general circulation. It is little less difficult to believe that there is any communication between the stomach and kidneys, or the stomach and mammary glands, especially as no such communication can be demonstrated. But are we not informed, on the best authority, that animals fed on madder and other substances

alternately, will have their bones composed of differently coloured layers? Ducks that feed on fish, have the smell and taste of fish. Fish that feed on certain banks, have poisonous qualities, as is well known to some mariners.

The *solidist* believes all substances taken into the circulation are homogeneous, whatever may have been the diet used; and so long as they remain under the vital control, each particle is similar to all the rest. But when once thrown beyond the control of vitality, (by the emunctories or secretory organs,) chemical affinities have their play.— But do not chemical affinities always act alike under the same circumstances? Will silver, in the pocket, be coloured by sulphur, when bread only is taken into the stomach? If infusion of watermelon-seed be drank, will the secretion from the kidneys be coloured by madder?

It is evident, then, that the fluids submitted to the action of these glands cannot be constitutently the same, whatever be taken into the stomach, else the chemical results would not be always dissimilar, according to the diversity of diet. But the *solidist* only means there is a suspension of chemical affinities during the control of vitality; he cannot mean that there is an annihilation of capacity in these homogeneous fluids, to reassume any but one set of affinities.

We must understand him, then, to mean no more than that the *vis vitæ* suspends, for the time, all chemical affinities.

But has any sympathist defined when this complete extinction of chemical affinities takes place? Has he shown any scale by which the degrees of vital power and chemical force can be graduated? If a substance be thrown into the stomach, it certainly carries with it some chemical affinities; and some substances continue to retain them, under all the vital efforts at decomposition.

Other substances quickly undergo a change, on meeting with the juices of the stomach. Chyme is formed; so far the efforts of the *vis medicatrix naturæ* have been crowned with success; but this fluid still retains enough of its original properties to be known on examination. A process of

assimilation, or, in other words, a process for adapting it to assume the shapes and condition fit for being taken into the lacteal vessels, is progressing, under the united efforts of different organs, of various conformation and use. This process of assimilation is not yet finished. The fluids are now only prepared to be thrown into the left subclavian vein, thence to pass on to the right ventricle of the heart, and thence into the lungs, where the blood gets clear of some of its effete materials; and is rendered fit to aid, in assimilating or vivifying that which has lately entered the circulatory system. Going on to the left ventricle of the heart, it is forced through the aorta to supply the numerous exigencies of the system. Perhaps after going a complete round in the circulation, any particular portion of recently received lacteal fluid, may not be so vivified as to be adapted to some of the nicer uses to which it is to be applied. We can readily suppose it to pass on through the direct communications of the arteries with veins; and this may be one important use of such direct communication.

When properly assimilated, a part according to its quality, may pass into those secernents adapted to the formation and deposition of osseous matter. A part, peculiarly modified, is suited to the appetency of such secerning vessels as form the denser membranes and ligaments. The coarser materials fall into such vessels as supply the muscles with proper nutriment. While those parts, which have underwent the most subtle elaboration, are fitted to supply the nervous system, that continually invigorates and imparts power to the whole.

At what time then, during this process, shall we say matters introduced into the circulation are completely assimilated? Are they completely vivified, till they are laid down from the circulation, with a certain duty to perform, to support the muscle in its capacity for moving, or the nerve in its capacity to transfer locomotive power? But, we find a deposition made of an insensible kind, only to give consistency and strength to the bony frame. Without

taking a view of the bearing the mind has over the secretory functions; without minutely considering that nice decomposing power, which resides in the lymphatic system, or in other words, resides in the chemical constitution of matter, after a certain degree of vitality is expended; without, at present, examining this lymphatic system nicely counterbalancing the actions, and fitting out effete materials for re-secretion, we can be able to see how complicated and mutually dependent all structure and every function in the system, is one upon the rest. Where then, in this chain of acting and reacting organic systems, shall we fix the primary inlet to morbid action. Paralyse any one important organ, and the rest must cease acting by necessity, independent of any sensation, or concert of feeling transferable by the nerves. Death would here be the consequence, as it follows when the vital structure of a vegetable is materially injured; cases by analogy, like this, would seem perhaps to carry but little convicting weight. But do we not find tenacity of life existing in animal organization, nearly in proportion to imperfection of the nervous system? If it should be said this tenacity of life arises solely from the want of communicating nerves; an admission would be made, that nutrition, growth, and decay, can go on without that supreme influence, the sympathist ascribes to the nervous system.

I will now make a few remarks on the vascular system. This system is all-important to both the formation and preservation of every organized living body.

The first moving point in the chick in ovo, is the heart. Even those ill-formed masses of flesh which occasionally have birth, are cherished by a partial circulation. Infants have been born without extremities, others without heads, yet the heart has never been wanting.* That the quantity of fluids contained in the vascular system, has influence, both in health and disease, will not be denied by any one con-

* See page 284, of this Number, where instances are referred to, where this organ was wanting.—EDITOR.

versant with physiology or pathology. Nor is the quality of these fluids of less importance, as I will attempt to show.

When once an animal system has all its organs as well formed as possible, and all the functions acting in harmonious concert for the mutual preservation of the whole; when all injurious causes are removed as far as practicable; the nutriment afforded at proper periods, in the most suitable quantity and quality, a long course of good health might be expected. But such is not the happy situation of animals. They are exposed to cold and warm temperatures, are hungry and thirsty, and their indiscretions push them into many dangers. Of all the means by which disease is excited in the system, none is so frequent as the introduction of substances into the stomach, which its powers, with the united efforts of the whole system, are either wholly unable to manage, or but illy able. Having extended my remarks farther than was at first designed, I shall proceed more particularly to consider the peculiarities of milk sickness. Here the stomach is the inlet to the offending cause.

The milk or meat, when received into the stomach and soon thrown off, (which is often the case when much is taken) leaves this viscus quickly able to regain its tone. If a small portion of milk be taken, the lacteals perhaps soon carry off part. But, if its noxious properties can so soon make a morbid impression on the stomach, it is probable a morbid appetency may be induced upon the lacteals, for conveying off this poisonous fluid. After being taken into the circulation, it wants that suitableness for assimilating which is necessary. Or if, for a while, it serve as fit nutriment, poisonous qualities will be disclosed, so soon as certain excretories and glands have finished their office. These newly formed fluids contained in the cavities of such glands and excretory vessels, thus produce a new source of diseased irritation. The *vis medicatrix naturæ* contending not only with the inflammatory action excited in the stomach, but also with the derangements commencing in more remote parts, continues to expend its force, till this insidious

poison every where deposited, begins to raise legions of armed bands. The common enemy secreted in the texture of even the minutest part, is every where ready to exhibit his force, and like the hydra of old, raised with increased strength at every blow; for just so much power as is consumed by the *vis medicatrix naturæ*, so much is added to the chemical enemy, which has now a partial being.

The stomach, having sustained the most violent shocks, gives way first; whilst yet life feebly exerts itself in other parts. The capillary vessels lose their energy; the hair and cuticle will rub off, leaving a loathsome specimen of the frailties of the vital powers. Soon universal death comes on. Here, then, may be seen a morbid secretory action, in vain labouring to expel disease, seeming, as the result proves, only able to form some mysterious combination of matter, which is capable of again propagating itself.

It is with this view of the subject, that I consider the fluids as the receivers of substances which do produce deranged states of the animal economy; and hence they may be considered, sometimes, the chief cause of extension of disease in the system, and always accessory to it. That the fluids are partially or generally changed from a healthy condition, in every general disease, has been seen by every unprejudiced practitioner of medicine; and, I think, much of what I have said is strongly in support of such belief.

To make a part of what has been stated more clear, I will be permitted to repeat something more in regard to my opinions of the pathology of milk sickness. I believe, that if but a small portion of poisonous milk be taken into the stomach, it might be so changed, by the juices it would meet with, as to produce no perceptible derangement, pass on to the lacteals, be taken up, vivified, and deposited. Perhaps, if the system suffered no material derangement or shock from any other cause, it might be again absorbed and conveyed out of the body. This process is gone through in those cases where animals, not having used large quantities of the poison, by rest and proper diet, feel little or no

inconvenience. If the same animals had underwent fatigue and the other immediate exciting causes, such commotions in the system would have been induced, by debilitating some parts, and hastening or retarding secretion in other parts, as would soon permit the diseased action peculiar to this poison to make its appearance.

That debility thus brought on, should interrupt the delicate secerning and absorbent vessels in the performance of their functions, is as certain as that they do deposit nutriment, and when it has become useless, that they remove it.

I before said, there may be materials in the blood, and also those composing part of any structure, which are ever ready to exhibit their innate noxious qualities, when the weakness of the vital power cannot control such quality.

In the case before us, the debility by fatigue and the increased vis a tergo of the blood, with other causes, are sufficient to permit these ill suited particles to refuse a proper change of place.

Now only suffer one of three particles composing some minute part, to refuse to perform its share in any office assigned them to do; and the incapacity of the other two, to perform without its assistance, holds good, as truly as, that three whole organs would be functionally deranged on the failure of one to execute its office.

Hence, if the whole system could only take on a few different degrees of action, and were composed of a few organs, having a similarity of use and functions, the derangement of one function, or one structure would be attended with greater danger of death, than under the complicated apparatus and actions which do regulate the animal economy. It is upon these principles the changes which occur in the slightest contusion can be accounted for. If the bruise be such as to destroy vital structure, a renovating process commences in the neighbouring sound parts, by which a separation of the dead parts is effected. But if the vital structure be not too much injured, the adjoining sound parts can impart or execute certain offices, which pre-

vent sloughing. A red, purple, and bluish colour is assumed by those particles not possessing living power—for these coloured changes are not solely the effects of vital laws, but also of those laws which are ever acting for the destruction of vitality. But the partial chemical irritation which these ill vitalized particles now possess, only acts as a proper stimulant to the living structure, with which they are in contact, and the disappearance of these injured particles, proves that they did there again come under vital control.

By adverting to the several principles laid down in this pathological sketch, it will be seen how mutually dependent and coexistent are propriety of structure and complete functional powers. By an attentive advertance to what has been said, it will also be apparent that the humero-sympathetic positions there taken could not well be reconciled to the notions of solidism recently taught in some of our schools. At least, it was my intention to show that the phenomena presented in milk sickness were not explicable on the same principles that might account for other inflammatory conditions of the stomach and intestines. Without entertaining the opinion I have advanced, I could not satisfactorily account for the diseased secretions, the torpidity of the nervous system, the rigidity of the muscular, or the general poisonous vitiation of even the solids. The doctrine of transfused poison from the stomach after death, will not explain or account for the deleterious qualities of the solids in milk sickness. Some of the positions I have assumed should have been illustrated, if the limits of this paper did not restrict me.

If any of my positions have a bearing not authorised by the sound principles of physiology or pathology, I will, on being convinced of that fact, refer it to inadvertence on my part; or to a worse fault, of which we have once been all naturally guilty—knowing no better.

ART. IV. *On the medicinal powers of the seeds of Phellandrium Aquaticum.* By J. F. DANIEL LOBSTEIN, M. D. of the Faculty of Medicine of Paris, and member of the Medical Societies of Paris, Bordeaux, Philadelphia, &c. &c.

THE *Phellandrium Aquaticum* is a biennial umbelliferous plant, indigenous to Germany and other parts of Europe, growing in ditches and in low marshy situations. The seeds are of a yellowish green colour, elliptical, slightly curved, flat one side and gibbous on the other; they are streaked, and terminate in small five-toothed heads. They have an aromatic odour, resembling angelica, and a strong spicy and acrid taste. Their active properties appear to reside partly in an æthereal oil, which they contain in considerable abundance, and perhaps in part also, in more fixed elementary principles.

This plant is sometimes confounded with other umbelliferous plants growing in swampy places, particularly with the *sium latifolium*, and *angustifolium* and *cicuta virosa*. The seeds of the *sium angustifolium* are more oval, pointed above, and terminated with a small style. The seeds of the *S. latifolium*, are smaller, more curved, stronger and more regularly ribbed. The seeds of the *cicuta virosa* are roundish, gibbous, compressed, greenish, and crowned with a small calix. The seeds of this plant are a mild narcotic stimulant, occasioning, when given in large doses, vertigo, intoxication, and dull pains in the head. The action of this remedy appears to be particularly directed upon the pulmonary organs; it promotes expectoration, lessens cough, and improves the morbid secretions of the bronchiæ.

Hufeland speaks in very high terms of the effects of this remedy in *phthisis pituitosa*, or mucous consumption, in which he gave it in doses of twenty grains, three times a day. It is also much commended for its power in phthisis,

by Jahn, Stern, and Nebel.* Burdach, in his excellent work on the *Materia Medica*, speaking of the medicinal powers of this article, says, "so long as the substance of the lungs has as yet not suffered any material disorganization from ulceration, or in what has been called *phthisis pituitosa*, the *phellandrium aquaticum* is one of our most valuable remedies." This medicine is also highly recommended in chronic bronchitis,—in weakness of the lungs,—and in chronic catarrhal affections arising from pneumonia, as well as in *phthisis* depending on suppressed cutaneous eruptions, or rheumatic affections of the breast. It has been also employed with much benefit in humoral asthma, and in chronic ulcers of the legs.

Some physicians advise it to be given in union with the extract of *cicuta*; but in my own practice, I have found it to answer best when exhibited in combination with pulv. g. arabic, and *saccharum lactis*.

Having stated, in a general way, the diseases in which this article has been found particularly useful, I will now relate the facts which have occurred in my own practice, in relation to its remedial powers. I have employed this remedy in four cases of *mucous* consumption, three of *phthisis ulcerosa*, or genuine pulmonary consumption, in two of humoral asthma, in one of chronic ulcers of the legs, in three of chronic catarrh, and in two cases of chronic spitting of blood.

CASE 1. The first case of *mucous* consumption in which I prescribed this remedy, occurred in Strasburg, in France. The patient was a middle-aged woman: she had taken various remedies for her complaint, before I saw her, and was, at the time I first prescribed for her, exceedingly reduced. Her cough was at times very violent, attended occasionally with a copious and tenacious expectoration. She was much emaciated, and affected with symptoms of dyspepsia; a slight paroxysm of fever supervened every afternoon, and the night-sweats were sometimes very profuse. On being

* Nebel de phellandro aquatico ejusque in phthisi purulenta virtutibus.

first called to her, I ordered such remedies as I thought calculated to mitigate the cough, from which she derived temporary benefit. After having continued, for a few weeks, with the use of the ordinary demulcents and expectorants in cases of this kind, I prescribed the sem. phellandrium, in union with sacch. lactis and gum arabic, in the dose of ten grains of the former, and twenty of each of the other two articles, three times a day. After having used this medicine about fourteen days, she was evidently better; the fever had almost entirely disappeared; and the cough was much less violent, and accompanied by a much easier and better expectoration. Under the continued use of the medicine she gradually recovered more and more strength; her appetite became good, and in about six weeks she was so well as not to require any further attendance.

CASE 2. This also was a case of mucous consumption in a young woman, of Strasburg. She contracted her disease from an imprudent exposure to a cold asmosphere immediately after having over-heated herself by dancing. She was at first affected by a dry cough, which she neglected until becoming weak and troubled with night sweats, with increased coughing, she requested my attendance. I at first prescribed a mixture composed of kermes mineral, gum arabic, and sugar, by which the cough and expectoration were considerably improved. The expectoration, however, soon became exceedingly copious, and emaciation, with great debility, ensued; I now prescribed the sem. phellandrium, and had the satisfaction of seeing my patient gradually recovering under its use.

I have since prescribed this remedy in two other cases of this variety of pulmonary disease, and with the happiest effects.

CASE 3. The first case of *phthisis pulmonalis ulcerosa* in which I employed this article, was in a woman at Strasburg, in France. She had been labouring under the disease for several years, and had undergone various treatments for her disease. She was about thirty-two years of age, and mother

of three children; I found her very emaciated, with frequent and troublesome cough, attended with a copious purulent expectoration; she had regular exacerbations of fever; a small, tense, and frequent pulse, and experienced debilitating night sweats. Scarcely any hopes of recovery were entertained by her friends, or indeed by myself. Being requested, however, to prescribe for her, I put her upon the use of the phellandrium aquaticum, and in the course of about four months she was almost entirely restored to her original health. When I left Strasburg, in 1818, four years had already elapsed, during which she was free from her disease.

CASE 4. This was also a case of phthisis pulmonalis, exhibiting the most unequivocal symptoms of the disease. The expectoration was purulent; the night sweats exhausting; the cough very troublesome; and debility and emaciation were rapidly progressing. She gradually, and completely recovered under the employment of the sem. phellandrium. I treated another consumptive patient, a weaver, in *Wanzenau*, near Strasburg, whose disease yielded effectually to the powers of this remedy.

CASE 5. This was a case of humoral asthma, in a widow about sixty-four years old, residing in *Greenbruch*, near Strasburg. She had suffered much from the frequent attacks of the disease, and had consulted many eminent physicians. After prescribing various remedies, without any particular advantage, I determined to give her the sem. phellandrium. She soon found herself relieved by this remedy, and was finally entirely freed from her complaint by its use.

CASE 6. This case of asthma occurred in a young woman at Reading, Pennsylvania. She had already suffered much from the disease, and undergone various treatments for its removal, without any advantage. In this case, the sem. phellandrium was signally serviceable. She was speedily and effectually cured by it.

Of the efficacy of this remedy in chronic catarrh, I have had repeated evidence. I treated a woman labouring under this

affection, in Strasburg, who had been a very great while affected with the disease. She was completely cured by this remedy, although I had previously given her a great variety of medicines, without the least benefit. I attended another patient suffering from this disease, also in Strasburg, in whom the usefulness of this medicine was unequivocally demonstrated.

I have also used the sem. phellandrium, with very good effects, in chronic and ill-conditioned ulcers of the lower extremities ; and in several cases of spitting of blood, I have known it to produce very salutary effects.

From my own experience with this remedy, therefore, I am persuaded that it is capable of very important remedial applications, and deserving of much more general notice than it seems hitherto to have received out of Germany. I do not pretend to introduce a new remedy into practice, but merely to bring to the notice of the American medical public, an old remedy which is too much neglected, and well worthy the attention of practitioners.

ART. V. *An account of a singular malformation of the Heart, Liver, and Spleen, in a Hog.* Communicated by DR. SAMUEL FAHNESTOCK, of Lancaster, Pennsylvania.

A VERY curious phenomenon was recently discovered by Mr. V. Waltz of this city, in a hog, the particulars of which I will communicate to you, as I obtained them from him. The hog weighed 128 pounds, and appeared to be in perfect health. On being stuck she bled freely, and ran perhaps sixty yards before she fell. The blood did not differ from its usual appearance. On laying her open, and taking out the entrails, he found, that the heart was wanting, and that, instead of this organ, there was only a small bag in the place where it is naturally situated, and which on

being opened was found to contain a small body resembling a heart, not larger than a small cherry; this little body or heart was attached to its pericardium by a slender neck, and appeared to be destitute both of auricles and blood-vessels. The lungs were of the natural size; nothing unusual was discovered in their structure. The liver was found in its natural situation, but of a size not larger than a Lima bean; the colour was that of an ordinary healthy liver. On its under surface there was a gall-bladder, about the size of the head of a large pin, which was full of very yellow bile. The spleen was in its usual place, of a natural shape and colour, but not larger than a man's finger. The intestinal canal was much larger than usual; the pancreas, kidneys, and bladder, were regular in size and colour. Mr. W. did not examine the blood-vessels, which is much to be regretted, as a knowledge of their structure, in this instance, might have thrown some interesting light on the subject of the circulation of the blood.

The preparations of these malformations are in the possession of Col. Jacob Slough, of Lancaster.*

REMARKS.

THE records of medicine furnish us with many remarkable instances of malformations of the heart, both in point of size and structure. *Morgagni* found it double in a calf;† *Tode* mentions a similar instance in a cock,‡ and another case of this kind is recorded in the *Memoirs of the French Academy*.§ *Sæmmering* also found a double heart in a goose;|| and two preparations of this kind are preserved in *Meckel's Museum*.¶ *Kerkringius* states that the heart of a

* Col. Slough, has had the kindness to transmit to us, the preparations of these singular malformations.

EDITOR.

† Ep. lviii. 57.

‡ *Arzneik. Annalen* St. V. S. 1.

§ *Memoir de l'Acad. des Science.* 1709. p. 16.

|| *Sæmmering's Annotations* to his translation of *Baillie's Morbid Anatomy*.

¶ *Sur les malidies du Coeur.*

boy, about nine years old, and of an ordinary stature, was found to be no larger than it usually is in a full grown fœtus ; * *Stoerk* mentions a woman who had died of an abscess in the liver, and in whom he found the heart not so large as an egg. † *Chavasse* also gives an account of a man, who had died in the sixty-fourth year of his age, and who during his lifetime had been much troubled with palpitations, and difficulty of breathing, in whom a heart scarcely as large as that of a new-born infant was found. ‡

Instances are recorded where the heart was entirely wanting in monstrosities of the human fœtus. The following references to cases of this kind are taken from Voigtel's *Morbid Anatomy*. §

With regard to the liver, cases of its entire absence are mentioned by various writers. *Schenk* dissected the body of a man who had died of dropsy, in whom he found no trace of a liver and spleen. || The venous branches of the abdominal viscera united and formed the vena cava. A similar case is related by *Zacutus Lusitanus*. ¶ The liver has also been found double, instances of which are given by *Schenk* and *Morgagni*. **

EDITOR.

* *Specil. Anatom.* p. 43.

† *Ann. Med.* II. p. 231.

‡ *Lond. Med. and Phys. Journal*, 1786, p. 409.

§ *Philosoph. Transact.* Vol. lvii. 1. *J. Van Meeckren*, *Observat. Med. Chirurg.* Cap. xxxv. *Miscel. Nat. Cur.* Dec. ii. An. ii Ob. 143. *Schenk* *Observat. Med. rar. Lib.* ii. n. 181. *Fabricii Hildani*, *Observat.* Cent. iv. Obs. 51. *Halleri*, *Opuscul.* p. 210. *Curtius*, *Spec. inaugur. de monstro humano cum infante gemello*, p. 19. *C. F. Daniels*, *Samml. Mediz. Gutachten und Zeugnisse.* S. 273. *Stark's Argiv.* B. ii. St. ii. S. 59.

|| *Ob. Medic. lib.* iii. Sect. ii. ob. vii. tom. iv. p. 8.

¶ *Prax. Admir. lib.* ii. ob. 38.

** *De causs. et sedib : Morb. Epist.* xlviii. S. 55.

ART. VI. *A case of Opisthotonos and Intus-susceptio, produced by Worms.* Communicated by ISAAC THOMAS, M. D. of West-Chester, Pennsylvania.

As it often happens, where cases of a very violent nature, and speedy termination in dissolution, are not permitted by the relatives to undergo an examination post mortem; it is the more interesting to the medical community to obtain facts relative to such cases, where those objections are removed. Although the following statements may not exhibit any thing new, they may nevertheless be interesting, as affording an example of the diseases that are sometimes produced by worms in the primæ viæ.

On the afternoon of the 1st of Dec. 1822, I was called to see J. G., a child aged about three years. I found him lying in bed on his back, his eyelids open, apparently in a laborious slumber; the skin dry and hot; the pulse full, and so frequent as scarcely to be counted; the tongue dry and furred, and the pupils of the eyes very much and permanently dilated. The history of the case, as far as I was able to learn from the parents of the child, who had been constantly with it from the time of the first attack, is in substance as follows:

On the day preceding, the child had been permitted to run about out of doors, barefooted, although the ground was wet, and the air very cold. They did not perceive any thing more than usual in the child, till very early on the morning of the day that I first saw it; when it called for drink, and soon after complained of pain in the bowels. The father then gave it a small quantity of spirits, and retired to bed again; after sleeping, they suppose, about an hour, they were awakened by the complaints of the child, which they found just recovering from what they termed a fit. Upon examining it, they perceived that the bowels had been copiously evacuated, and it soon had another spasm.

From that time they recurred at short intervals till the time that I saw the child. They described the spasms to me, which I believed to be of the character of Opisthotonos. The muscles of the back were very powerfully contracted, so much so as to make the head and heels nearly approach; and those on the back parts of the arms and legs were very rigid, and the face much distorted. The tongue was greatly injured by the teeth being forcibly brought together, and bled profusely. They had, previous to my seeing it, placed it in a warm bath, which relieved it partially for a short time, but the spasms were soon renewed. The inflammatory symptoms running pretty high, I abstracted $\frac{3}{4}$ v. of blood, and gave a cathartic of calomel and jalap, and left gr. iv. of calomel to be repeated in six hours, if the first dose did not operate, and likewise ordered the warm bath to be provided. Spasms returned. Having left some other directions, I was about leaving my patient, when Dr. Charles W. Parish, of this county, arrived. He concurred in the plan I had adopted, believing with myself, the cause of the disease to be seated in the alimentary canal.

Dec. 2d, 10 A. M. We met according to appointment, and found that the spasms had been slight, and at longer intervals, since the bleeding. After taking the second dose of cathartic medicine, the bowels were moved, though not actively; the pulse became slower and less tense, than it was on the preceding evening. The skin dry and husky; the pupils contracting and dilating frequently, without any variation of the quantum of light. The respiration was hurried and laborious, and occasionally the muscles of the face were considerably distorted. Believing it necessary to evacuate the stomach, as there was a distressing collection of mucous about the fauces, and at the same time wishing to determine to the surface, we ordered the antimonial wine to be given, and to be repeated at short intervals to effect these indications, and left some laxative medicine to be given after the effects of the antimonials had been produced; but after the dose had been repeated several times, they omitted

to continue it, and in the evening the patient expired, having been diseased only about forty hours.

Dissection. Immediately upon opening the abdomen, and bringing the intestines into view, we discovered very considerable marks of inflammation. When they were separated, we found that intus-susception had taken place to a great extent, at the upper part of the ilium, and perhaps a portion of the jejunum was involved. That we might not make any error, we cut the intestine off at the upper part of the intus-susception, and then drew out the received portion, and much to our astonishment, found that there were twenty-six inches, by strict measurement, received in a space of about six inches. These parts presented a slight blush of inflammation, but not considerable. Immediately below the portion where this derangement took place, we discovered that about fifteen inches of the canal was in a very highly inflamed state, and that it contained a numerous collection of lumbricoid worms. The other viscera presented nothing unnatural in their appearance or structure; and we felt ourselves entirely satisfied as to the immediate cause of the disease.

This case goes far to prove that some of the most violent spasmodic affections that distress humanity, may be induced by irritation in the primæ viæ; and that irritation in it, may be produced by worms. It is probable that the immediate irritation of these animals produced the intus-susception to a certain extent, and that the great degree to which it did take place, was caused by the violent contraction of the muscles on the back, as those of the abdomen from that cause were rendered extremely tense and rigid, so much so as to produce at least two very copious discharges from the rectum.

If it is necessary that more facts than are generally known, be obtained, to confirm our opinions respecting the extent of disease produced by worms in the alimentary canal, I humbly submit the above.

ART. VII. *A proposed Improvement of Desault's Splints for Fractures of the Thigh.* By DR. ARCHER, of Norfolk.

ALTHOUGH much has been written on the comparative advantages and disadvantages resulting from the various methods of treating fractures of the thigh, I believe it is now pretty generally acknowledged, as well in this country as in Europe, that the plan suggested by Desault, modified according to circumstances, is that which best attains the end, and is attended with fewest inconveniences.

Doctors Physick and Hutchinson have undoubtedly made important additions to the apparatus, and I cannot accuse myself of vanity when I say, that the suggestions I am now about to make, are calculated to render it still more perfect, inasmuch as they obviate several difficulties incident to the splints now in use.

I recommend two splints, each with a crutch-like extremity well padded. The first, similar to Dr. Physick's, to extend from the axilla to the distance of eight or ten inches below the foot; the other, from the perineum to the end of the first. The short splint is perforated longitudinally, from the lower extremity, with a dozen or more holes about half an inch diameter, and the same distance from each other; and as the interstices would be too weak to resist the force necessary for extension, a plate of brass or other metal, perforated in like manner, is screwed on to correspond with the holes in the splint.

The long splint is also furnished with a plate of the same material, having in its centre a hole one inch in diameter, surrounded by a circle of holes large enough to admit a wire pin about the size of a small quill. Through the large opening a piece of *lignum vitæ*, turned to fit neatly, is passed, one end being reduced sufficiently to enter the holes in the short splint, and the other, slit to receive a piece of wood as a handle, making together a windlass, by means of

which the leg is extended. In one end of the handle a hole is bored, through which runs a pin adapted to fit the circle of holes in the long splint; so that the limb being extended, it is pushed into one of those holes; when the windlass becomes fixed, and the extension permanent.

The splints are to be confined to the leg in the ordinary manner.

The advantages resulting from this apparatus are: That it is more conveniently applied, inasmuch as there is no necessity for a counter-extending band on the perineum.

The counter-extension is made directly in the longitudinal axis of the body, and consequently the upper fragment of the bone is not liable to be thrown out as in Desault's plan, and more or less so even, with Dr. Physick's improvement, as the power is still applied diagonally.

It occasions no obstruction in the venous or lymphatic circulation of the thigh; which frequently results from the bandage over the groin, when stretched to the extent necessary to overcome the resistance of strong muscular contraction.

The extension of the limb can be made more regularly, and with less difficulty, by means of the windlass, than by a strap or handkerchief buckled or tied to the splint.

In the event of the axilla being unable to sustain the necessary pressure for extension, either from excoriation or any other cause, the whole power may be exercised upon the perineum as in Desault's plan, by means of a bandage connected with the short splint, and attached to the upper end of the long one; the splints in this case, if of sufficient width, acting as a bridge, and relieving the soft parts from the pressure of the bandage.

I am aware that the idea of extending the leg by a mechanical power is not original with me. Boyer used an iron screw acting upon the principle of a tourniquet, which is still in common use in the French hospitals; but by a comparison of the two plans, both as to convenience, simplicity, and effect, I cannot doubt as to which the practical surgeon would give the preference.

ART. VIII. *On the Morbid Influence of the Spinal Nerves,*
in a Letter from R. P. PLAYER, to the Editor.

(From No. 28, of the Journal of Science, &c. of the Royal Institution.)

SIR—At the commencement of the present year, you favoured me with publishing in the *Journal of Science*, an account of a morbid connection which exists between the origins of the spinal nerves, and diseases of parts to which they are distributed. I now beg leave to submit to your notice some results of further attention to this subject.

1. In almost every disease of the upper and lower extremities, of the neck and of the trunk and its organs and viscera, preternatural tenderness may commonly be discovered on pressure between the vertebræ from which the nerves emerge which proceed to the affected parts, or those spinal branches which are more immediately connected therewith.

2. In the diseases in which the circulation is much accelerated, in cases of disease affecting important organs, and more particularly when occurring in old age, this symptom may frequently be discovered to extend along a considerable portion of the vertebral column.

3. Diseases of the head, and its organs, and of those to which the par vagum is distributed, appear primarily to be connected with, if not consequential on, this morbid state, of one or more parts of the spine. The effects of remedies directed to the spine, seem to prove this. When organization is impaired, effects then become causes.

4. In many diseases besides the existence of preternatural tenderness about the origins of the nerves which proceed to the affected parts, this symptom may also be discovered about the origins of one or more of the intercostal nerves on the left side of the spine beneath the scapula, and opposite the upper portion of the stomach.

5. In diseases of females, this symptom may, in like

manner, be frequently found about the origins of some of the sacral nerves.

6. By the employment of remedies at these parts, some of our most obstinate diseases may be rendered comparatively tractable. For instance, *pain*, in general, may be almost immediately relieved; and the symptoms of gout, rheumatism, phthisis, and cancer, more effectually controlled than by any other means I am acquainted with.

7. The principal remedy is the abstraction of blood, in a quantity proportionate to the vascular fulness of the patient. General bleeding premised, when requisite.

8. Cupping is generally the best mode of removing vascular fulness from the origins of the spinal nerves; this must be repeated according to the recurrence of symptoms or the chronic nature of the case. The glasses should be much larger than they are usually made. Blisters, and similar remedies become proper, after the due depletion of blood.

9. A recent fit of the gout may be cured by a single abstraction of blood proportionate to the plethoric state of the patient; but in this disease the origins of the intercostal nerves opposite the stomach, will commonly require to be relieved, as well as the origins of those which proceed immediately to the affected part or parts.

10. With this precaution, not only the phenomena of gout, but their cause also appear to be removed; and if organization has not been impaired, the constitution to be completely relieved.

11. In cases of gouty affections of the stomach itself, the abstraction of blood from, or a blister applied over, the origins of the affected intercostal nerves, as the case may require, gives speedy and complete relief.

12. The preceding diseases are only adduced as examples of the advantage of directing remedies *to the spinal brain, and to the origins of the nerves which proceed to affected parts*, and to excite attention to the extensively beneficial application of which this practice appears capable, in the relief and

cure of *diseases in general*; but it is by no means intended to recommend it to the exclusion of other remedies.

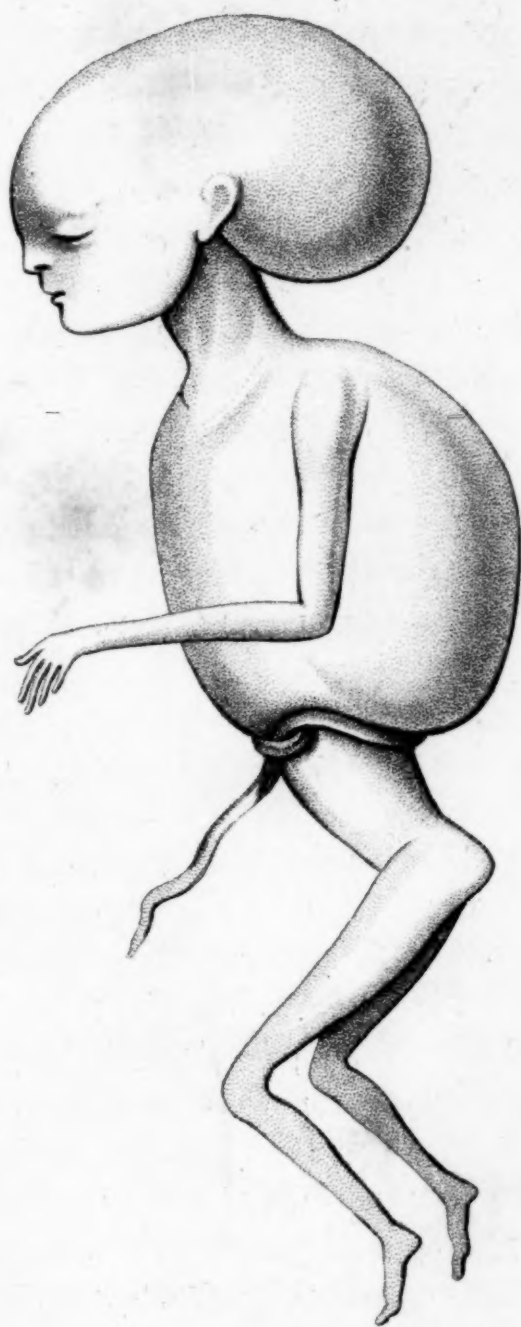
13. Works on pathology and physiology furnish numerous cases and experiments, which tend to prove that *pain* and *disorganization*, as well as *impaired function* and *paralysis*, are consequent on causes which interrupt the due transmission of nervous influence of the affected parts. It has been very justly remarked, that nature is sparing of causes, but profuse of effects.

Malmsbury, Dec. 1, 1822.

ART. IX. *A case of Death of a Fœtus in Utero in consequence of the Funis Umbilicalis having been tied around its body.* Reported by HORATIO G. JAMESON, M. D. Honorary Member of several Medical Societies, &c. With a Plate.

SOME years ago Mrs. G., after the fatigue of riding five or six miles, a short period before her expected accouchment, was attacked by violent labour. I was speedily sent for, but before I arrived at her abode, five miles from Gettysburgh where I then resided, she was delivered of twins. I was shown a fine healthy female child of good size for a twin, and was informed that another child had been born dead.

On examining this child in an adjoining room, I found it had been dead a few days; the cuticle had still some firmness in places, while in other places it peeled off. Its abdomen was almost cut in two by the umbilical cord having been passed around; the features of the face were strangely unseemly, the nose having almost no prominence; the chin short; neck slim; head greatly enlarged; breast prominent and deformed. The whole appearance was such as most clearly evinced that it had, long prior to its death, become entangled in its umbilical cord, that the head must in



some way have slipped through a noose, occasioned, probably, by an unusual length of the cord, and that it had pined away gradually as the knot became closer, and thus finally destroyed it. I regret I had no opportunity of making any further examination. The mother and the other child did well, and I had the pleasure of seeing her safely delivered of another child two years afterwards.

ART. X. *Observations on the use of Eupatorium Perfoliatum in Tinea Capitis.* Communicated by WILLIAM ZOLLICKOFFER, M. D. of Maryland.

THERE is, perhaps, no indigenous vegetable production of the United States, with which we are acquainted, that is more deserving of the attention of physicians than the article that is the subject of the present paper. Its utility, as an invaluable herb, possessing medicinal virtues, which are admirably adapted to a variety of affections, have long since been known to the medical practitioners of this country. It is therefore presumed, that it would be altogether superfluous, on the present occasion, to make any remarks relative to its successful application in any other disease than that of *tinea capitis*.

For some considerable time past, I have been in the habit of employing the *eupatorium perfoliatum* in conjunction with the *cremor tartari*, in this truly distressing and unpleasant malady. The utility of this prescription was first suggested to me by John Buckler, M. D. of Baltimore, whose successful employment of it induced me to resolve to recommend its use in the first case that should claim my attention. The cases in which I have given it, fully satisfied me of the correctness of Dr. Buckler's observations; for in eleven cases, in which I recommended this prescription, I had the pleasure of seeing my patients cured entirely. The only case in which there appeared to be any difficulty, was re-

lieved in five weeks, and the remaining ten, within two and three weeks after.

The following is the prescription in which I have generally employed it in cases of adults, with the mode of administration :

R Pulv. Foliorum Eupatorii Perfoliati, ℥ss.
 Pulv. Crem. Tartari, - - ℥i.
 Misce et fiat pulveres viii. quarum i. mane, hora meredie, vespereque, sumenda.

In consequence of children being generally averse to taking this preparation in substance, I have been induced to prepare it according to the following formulæ :

R Fol. Eupatorii Perfoliati, ℥i.
 Cremor Tartari, - ℥i.
 Aquæ bullientis, - ℥viii.
 Coque, dein cola et adde scch. albi quantum sufficit ut fiat syrupum quorum cochlearia minima ii. ter in die sumenda.

I have never as yet found any difficulty in getting children to take this preparation. The use of this remedy I would most confidently recommend to the particular regard and attention of physicians in general, as being one of the most valuable and effectual remedies in *tinea capitis*.

ART. XI. *On the method of extracting Poisons from the Stomach.* By SAMUEL JACKSON, M. D. of Northumberland.

IN all branches of human knowledge, and most particularly in that of Medicine, the publications of ingenious men are now so frequent and numerous, that it is only a few of conspicuous merit that are universally read or are expected, *virum volitare per ora*, to find their way to a distant country, and to arrest the attention of those who are engaged in the duties of an anxious and laborious profession.

Whether the early volumes of the Eclectic Repertory ever reached the metropolis of England is rendered doubt-

ful, since we find, from the last numbers of the Medical Recorder and of the Journal of Foreign Medical Science, that some of the writers of that city have claimed the invention of a new method of washing and extracting poisons from the stomach, by means of a tube and syringe, for their fellow citizen Mr. Jukes. "We might with justice, say they, be considered as forgetful of the duty we owe the profession, were we to fail in laying before them a description of a very excellent apparatus which Mr. Jukes, its very ingenious inventor, favoured us with a sight of."*

We are entirely willing to grant Mr. Jukes all the credit the journalists would claim for him or he claim for himself, as the same thought might have occurred to many ingenious men, who were seriously engaged in relieving the distresses of suffering humanity. But the priority of discovery and the demonstration of its great utility must certainly be awarded to our countrymen Dr. Physick. As your useful work is no doubt read by many who have never seen the early numbers of the Eclectic Repertory, I will endeavour to abridge what the Doctor then published on this subject, in the year 1812.

On the 6th June at nine o'clock in the evening, the professor was called to visit two twin children of three months old, William and Edmond, to each of whom one drop of laudanum had been given about two hours before his arrival. On inquiry he found that the vial from which these fatal drops had been taken, had some weeks before contained nearly an ounce of the medicine, but, having been left without a cork, it had evaporated so much that one drop only could be procured, which was given to William;—that two drops of water were then put into the vial and stirred with the sediment by which means a drop was obtained for Edmond.

Ipecacuanha was immediately prescribed, but in vain, the children could not swallow. Here no time was to be lost. Their livid countenances, sunk pulse, slow, laborious

* Lond. Med. Repos. Oct. 1822.

respiration and convulsions, which alike affected both the children, evidently portended a fatal event; therefore a dram of ipecacuanha was injected, through a large flexible catheter, into the stomach by means of a pewter syringe. No operation followed. William was now in the very grasp of death; his face was livid, his pulse and respiration had almost ceased, and nature's last effort appeared in a convulsive action of the muscles of the mouth and neck.

The Doctor now passed the catheter again, and by applying the syringe to its projecting end, he drew up the fluid contents of the stomach and immediately injected warm water, which was again withdrawn. These operations were alternated two or three times, but when completed no sign of life remained. Some spirit and water with a little vinegar were then injected, and in less than one minute the child again inspired, the pulse was perceived at the wrist, external stimuli were applied, and in four minutes there was every reason to believe that the patient would soon be restored.

By this time Edmond had passed into the same state of apparent death from which his brother had just been recovered. The same measures were used, and with the same happy result. In about half an hour, however, his breathing became very slow and laborious, and his pulse, which had just before been too much excited, became so feeble that he appeared to be sinking. These symptoms were imputed to the intoxicating effects of the spirit, and therefore it was withdrawn by the syringe, but alas! the removal of this stimulus left the patient almost lifeless. A little weak brandy and water was therefore injected, and the child was again revived. He had slight convulsions during the night until five o'clock, when they left him and in a few days he was well.

William, whom we left above in a promising way, showed the same symptoms of ebriety, but the spirit was not withdrawn from his stomach, as his brother had been so much sunk by that operation. He had frequent slight convulsions

until nine o'clock, just 14 hours after taking the fatal dose, when he expired.

In a note the Doctor tells us, that this operation had occurred to him as early as the year 1800, and that he had for many years recommended it in his lectures;—that his nephew Dr. Dorsey, in the year 1809, had actually performed it, though without success, owing to a fatal lapse of twelve hours before his arrival;—that since writing his account of it he had been informed by a friend, that a French surgeon had proposed a similar operation, in some public journal, which this informant had unfortunately mislaid.

This then is the substance of what our Professor published in Oct. 1812. In the following April and at page 380 of the same volume, he announces to the world, that the plan had been completely successful in several instances, and that two patients in particular, who had taken large quantities of laudanum, had been entirely restored by Dr. Dorsey, under such circumstances, that no other treatment could have succeeded. "But," says the American Professor, "I have now an act of justice to perform, in ascribing the merit of the invention to Dr. Alexander Monro, jun. of Edinburgh, who published it in his inaugural thesis, in A. D. 1797; of this circumstance I was entirely ignorant when I sent you my paper; I probably should still have remained so, had it not been mentioned in his book of *Morbid Anatomy*, a work which has but very lately come into my hands."

Here then are many claimants for the honour of the first invention. Dr. Physick very modestly renounces it in favour of Dr. Monro, though perhaps it fully appears, that the nephew, under his auspices and tuition, was the first to bring it into actual operation, and that he himself was the first to operate with success.

I well remember the satisfaction that Dr. Physick's operation afforded in Philadelphia, and that the invention of it was cordially ascribed to himself. But now, after a lapse of ten years, we find it claimed by the editors of the Lon-

don Medical Repository for Mr. Jukes, surgeon in Westminster. How much was I surprised in reading their account of it when, at the same time, I could look over my shoulder to a box containing a large syringe with Physick's elastic tube, two feet long and a fourth of an inch in diameter, an apparatus that has occupied that station for the last nine years.

It is true that our American tubes are not tipped with an ivory globe, an addition which I cannot but consider as wholly useless. In many instances I have used the simple catheteroid tube for the purpose of introducing medicine and nourishment, and have always found it to answer every indication. The elastic bag is thought by Mr. Jukes himself not equal to the syringe.

Far be it from me to accuse the London surgeon of plagiarism; such a thought never came into my head for a single moment. To him great merit must be ascribed for his heroic experiments on himself in the administration of this salutary operation; experiments which few would have had the courage to undergo, and which it is now not necessary to repeat.

Northumberland, Feb. 24, 1823.

ART. XII. *An Account of some experiments on the Nerves;* by M. MAJENDIE. *With some observations,* by JOHN SHAW, Esq. Lecturer on Anatomy in Great Windmill-street.

“FOR a long time I have been desirous of discovering what effects would be produced upon an animal by dividing the posterior roots of the spinal nerves. I have made frequent attempts to cut those twigs, but they all proved unsuccessful, in consequence of the great difficulty which is met with in opening the vertebral canal, without at the same time so injuring the spinal marrow, as either to destroy or

to be productive of great torture to the animal. In the course of last month, however, a litter of eight puppies, about six weeks old, having been brought into my rooms, I thought they afforded a good opportunity for renewing my attempts to open the vertebral canal.—With one stroke of the knife, I succeeded in exposing the posterior half of the spinal marrow, enveloped with its membranes; and I had only to divide the dura matter which surrounds it, to lay the whole organ completely bare. By this method of proceeding, I had under my eye the posterior roots of the lumbar and sacral nerves; and, by raising these alternately with a pair of fine scissors, I could easily divide them upon one side, without at the same time affecting the spinal marrow.

“ I had not entertained the slightest idea of what would be the probable result of this experiment; and, after the wound had been closed by the application of a suture through the skin, I observed the effects produced on the animal. I was fully persuaded, at first, that the division of the nerves had completely paralysed the member which they supplied; for, in fact, it showed no sensibility, either when pricked or violently pinched, and was to all appearance totally motionless; but soon, to my surprise, it began to move very distinctly, notwithstanding the sensibility of that part was quite extinguished.

“ In a second and third experiment, I was presented with exactly similar results; and it then occurred to me as more than probable that the posterior roots of the vertebral nerves were possessed of functions distinct from the anterior, and that they were the nerves which were destined for sensibility.

“ It was a natural suggestion, in order to make good this conclusion, to cut the anterior roots only, and leave the posterior ones undivided; but this I discovered was more easily imagined than performed: for at first sight it appeared to me an impossibility to expose the anterior part without injuring also the posterior roots. This, however, did not deter me from inventing plans to overcome the diffi-

culty, and at length, after two days consideration, I determined to pass a kind of cataract knife in a direction anterior to the posterior roots. From its blade being very narrow, I expected that, by directing the sharp edge along the posterior face of the bodies of the vertebræ, I could by this means divide the roots. This plan, however, I had to resign, on account of the large veins which are contained in this side of the canal, and which were opened by every cut that was made in a forward direction.

“During these attempts, however, I discovered that, by tearing off the dura matter from the spinal marrow, I could display the anterior roots, united in bundles, just where they begin to pierce that membrane. This was all I could desire, and in a very few seconds I succeeded in dividing all the pairs of nerves which I wanted. In this, as in the preceding experiments, I divided those on one side only, in order that I might have a better opportunity of observing the effects by the contrast.

“It is easily conceived how curious I was to discover the effects of this last experiment; they were distinct, and left no room for doubt: the limb was altogether deprived of the power of motion, and totally powerless, yet its sensibility was evidently preserved. In short, to make the matter perfect, I divided both the anterior and the posterior roots in the same animal; the consequence was a total loss both of the sensation and power of motion.

“These experiments I have repeated and varied upon different animals, and the results, both with regard to the anterior and posterior roots, were confirmed in a manner the most satisfactory. These researches are to be continued, and in the next Number I shall offer a more detailed account of them. For the present let a positive assertion be sufficient, that the anterior and posterior roots arising from the spinal marrow possess different functions; and that to the posterior more particularly belongs sensibility, while the anterior seems to be more especially connected with the power of motion.”

The importance of the facts discovered by these experiments must be evident to every one; and it must be gratifying to the true friends of science in this country to find that M. Majendie, whose sole object in these pursuits appears to be the promotion of physiology, has, by his experiments, come to the same conclusions as those which had been previously deduced by Mr. CHARLES BELL, from observations made on the anatomy of the brain and spinal marrow. The truth of these deductions were also by him put to the test of experiments; the results of which, however, though they corresponded with those of M. Majendie, were not so conclusive. As I have entered into some speculations on the same subject, I shall, perhaps, be excused in bringing before your readers the following extract from the last volume of the *Medico-Chirurgical Transactions*:

“I shall, however, take the liberty of trespassing still more upon the time of the Society, by making a few remarks upon a very curious question, which has particularly excited the attention of physicians in all ages since the time of Galen:—Why sensation should remain entire in a limb, when all voluntary power over the action of its muscles is lost; or why muscular power should remain when feeling is gone?

“The attention of Galen was particularly directed to this question, in consequence of his having been called upon by some of his contemporaries, to account for the manner in which he had cured a partial paralysis of the finger by applications made to the spine.

“In answer, Galen told them that two sets of nerves went to every part; one to endow the skin with sensibility, the other to give the muscles the power of voluntary action. This opinion was probably founded on a mere theory; but the facts lately discovered, and the observations which have been noted in attending to the phenomena of disease, though they do not afford absolute proofs of the correctness of Galen's supposition, still they go far to establish the fact, that every part of the body which is endowed with two

or more powers is provided with a distinct nerve for each function.

“The form of the nerves which at the same time endow the skin with sensibility and the muscles with the power of voluntary motion, is such that they appear to be single cords; but, if we examine the origin of any of those nerves, we shall find that it is composed of two packets of fibres, which arise from distinct parts of the spinal marrow. These origins are soon enveloped in the same sheath, so as to appear to a superficial observer to form a single nerve.

“It is not too much to suppose that either of these origins may be affected while the other remains entire. To prove this by ocular demonstration will perhaps be impossible, and therefore the question will probably remain undecided. But we have already seen examples of the consequence of injury to a nerve that has a single root, viz. the portia dura; for, if we cut it, there will be only one set of actions paralyzed; while, by dividing a nerve which has a double origin, viz. the fifth, we shall destroy two powers, viz. voluntary motion and sensibility. We know, also, that, when we cut through the trunk of a nerve going to the hand, we destroy both sensibility and the power of motion.

“In reference to this subject, I shall state the result of certain experiments which were made about thirteen years ago, by Mr. Charles Bell. The two sets of filaments by which each spinal nerve is connected to the spinal marrow were exposed: on irritating one set, convulsion of the muscles upon which the nerve was distributed ensued; but, when the other was excited, no perceptible effect was produced. These experiments we have often repeated, and always with the same results; but, from the violence necessarily used in making them, it has been difficult to ascertain which of the filaments bestows sensibility on the part. It was easily shown that, if only the posterior set was destroyed, the voluntary power over the muscles continued unimpaired; but the pain necessarily attendant upon the

performance of the experiment prevented us from judging of the degree of sensibility remaining in the part.

“It was, I believe, the result of these experiments which induced Mr. Bell to give an opinion nearly similar to that of Galen, in a short essay on the Anatomy of the Brain, which was printed and distributed among his friends in 1809. An opinion somewhat similar has been lately offered by Dr. W. Phillip, in answer to a query of Dr. Cooke’s.

“If the view which I have here taken of this question be correct, it may lead to this rule of practice. If only one set of functions of a spinal nerve be deficient, we should apply our remedies to that part of the system from which the nerve arises; but, if both functions are impaired, we must then direct our inquiries to the state of the nerve in the whole course, from its origin to its distribution, as the loss of power is probably owing to some affection of a part of the nerve, after the two sets of filaments by which it arises, are united together.”

Since that paper was published, I have made several experiments, which, at the same time that they prove the correctness of M. Majendie’s observations, also establish, in the most satisfactory manner, one of the most important discoveries of Mr. Bell,—viz. that the fifth nerve and the spinal nerves are of the same class, and that they in every respect correspond with each other. At present I shall not enter fully into this question, but only state the following circumstances, which will probably be acknowledged to be correct:

1. That the head and face, having many parts in every respect similar to the neck, trunk, and limbs, must have corresponding nerves.
2. That the manner in which the spinal nerves and the fifth arise by double origins, is very similar.
3. That the two origins of the fifth are united by a ganglion exactly of the same shape and character as those which unite the two origins of the spinal nerves.

4. That the manner in which the branches of the fifth are distributed, and those of the spinal nerves, is the same.

And, lastly, with reference to the anatomy, we find that the same kind of connection exists between the fifth and the sympathetic, as between the latter and the spinal nerves. In their morbid affections, the similarity also holds good: thus, in the common cases of hemiplegia, the spinal nerves and the branches of the fifth are similarly affected. In this disease, the voluntary power over the limbs and the sensibility of the side affected are generally destroyed; but in some cases the voluntary power is lost, and the sensibility continues unimpaired, or *vice versa*. This variety also occurs on the face; for the jaw will drop, and there will be all the marks of paralysis, but the sensibility of the skin and the sense of taste will continue entire.

In experiments on the nerves of the spine and on the fifth, we meet with the same results. If, as in the operation which is now frequently performed on the nerves of the horse's foot, we cut a spinal nerve after the branches are given off to the muscles moving the part, we shall destroy only the sensibility of that part; but, if we cut the nerve nearer to the brain, we shall not only destroy the sensibility, but all the power of motion. The same happens in experiments on the fifth; for, if we cut a branch which is principally distributed to the skin of the lips, we shall destroy the sensibility of the part, but impair the power of mastication only in a slight degree; but if we divide the nerve farther back, then we shall not only destroy the sensibility of the skin, as in the first experiment, but also cut off the power by which the jaws are moved. I cut a branch of the fifth upon the face: the sensibility of the corresponding side of the lip was destroyed, but little paralysis ensued. I cut the nerve nearer the brain, and at a point previous to its having given off the branches to the muscles; then the jaw fell, and the muscles of that side were powerless. I varied the experiment, by irritating the nerve where it lies in the sphenopalatine fissure, immediately after an animal

was killed: the jaws then came together with much force, indeed, so as to nip my assistant's finger severely. This last experiment may be compared with the very common one of galvanizing the nerves which pass from the spinal marrow to supply the muscles of the extremities.

When the inquiries with which we are now occupied are farther advanced, I shall enter more minutely into this question: at present I shall only offer you some general observations upon the difference between the original, or spinal nerves, and those of the superadded class.

To distinguish the superadded nerves from those of the spine and the fifth, we may first look to the facts afforded by comparative anatomy,—viz. that the first class corresponds to the number and complication of the superadded organs. If we, then, examine the anatomy of the nerves forming this class, we shall find that, instead of their rising by double origins,—i. e. by distinct roots from the two great spinal columns,—they each arise by a single series of fibrils, from a distinct portion of the spinal marrow. There is no ganglion on the roots; at least, there is no ganglion at all similar to those which are found on the fifth or on the spinal nerves: (it is ridiculous to compare the swelling on the par vagum, after it has emerged from the skull, with the ganglion which connects the roots of the spinal nerves.) The manner in which the superadded nerves are distributed is also different from that of the spinal nerves.

If, in the living animal, we expose a spinal nerve, and one of the superadded class on the face or side of the neck, and irritate them, we shall have no difficulty in determining that the spinal nerve is the most acutely sensible to pain: indeed, in the greater number of the experiments which I have made, the degree of sensibility of the superadded nerves seems to be so slight, when compared with that of the spinal nerves, as to make it a question whether they be at all sensible.* If, after an animal is dead, we stimulate a

* Some difficulty arises here from our mistaking compounded nerves for

nerve of each class, either with the common pincers or with the galvanic forceps, we shall be convinced that the nerve of the superadded class continues the longest to influence the muscles. But the greatest and most marked difference between the two classes is discovered by observing their natural functions, and the phenomena of disease. Let us take any one of the superadded nerves, the portio dura, for example, which goes to the eyelids, nose, and mouth: by a voluntary effort, we can close the eyelids, or we can frown; but is either winking or that action of the eyelids and brows which is so marked during mental emotions, or the closing of the eye during sleep, governed by any power of volition? We can move our lips at will; but is smiling or laughing, or the action of the lips during anger, under our control? or can we whistle or blow, unless the actions of the lips and cheeks are in unison with the respiratory apparatus of the throat and chest? We can turn up the tip of the nose, or we can pull it down; but can we command the muscles of the nostrils during violent respiration? What are we to think of the blindness of those who cannot discover the strong actions produced through this nerve in the muscles of the nostrils and lips, during that state of apoplexy where all voluntary power is lost? All these complicated functions will be destroyed by cutting the portio dura; whereas, if we only cut the fifth, which gives branches to all the parts that the portio dura does, these various faculties will continue unimpaired, while the sensibility of the parts, and a set of voluntary actions quite distinct from those already enumerated, will be destroyed.

If we examine the actions of those parts of the throat and neck which are supplied with branches from the par vagum, we shall discover that they are endowed with the same

simple ones. On one occasion I was nearly drawn into a mistake by not observing that a small filament of the fifth nerve entered into the portio dura on the face. There may be branches of the nerves of simple sensation combined with those of the eighth and ninth.

variety of voluntary and involuntary powers;* and what is still more extraordinary, we shall find that the actions performed through the medium of the spinal accessory are of the same character. Thus, by a voluntary act, we can raise the sternum in a long inspiration; but, if we put our fingers on the sterno-cleido mastoideus, and snuff quickly up, we shall find that we cannot prevent the muscle from acting; and this involuntary action of the sterno-cleido is still more evident in sighing, sneezing, or coughing.

The phenomena presented when the superadded nerves are affected by disease, are in every respect different from those displayed when the fifth or spinal nerves are in a similar state. Upon this subject I shall not enter, but refer to the several papers which have been already published in the *Philosophical Journals*.

It would, perhaps, be well to make a short summing-up of the discoveries referred to in this sketch, but I will defer this, in the hope that you will, in a succeeding Number, permit me to offer you a short view of the whole question. — *Med. and Phys. Journal*, Oct. 1822.

* The almost complete destruction of the power over the lips as manducatory organs in those animals which graze, by cutting the portio dura on either side, makes the analogy between the par vagum and the portio dura more striking. The par vagum not only regulates the actions of the larynx and pharynx in breathing, but also in swallowing; so it would appear that the portio dura, in some animals, not only gives the muscles of the nose and mouth power as respiratory, but also as manducatory organs. This question involves a very curious and interesting subject, to discuss which would far exceed the limits of a communication.

REVIEWS.

Quidquid venerit obvium, loquāmur
Morosa sine cogitatione.

MARTIAL.

ART. XIII. *Memoires sur les Maladies Chroniques, les Evacuations sanguines et l'acupuncture.* Par L. V. J. BERLIOZ, M. D. Paris, 1816. pp. 343.

IT will undoubtedly be conceded by all who have devoted some attention to the progress of medicine in this country, that we have attained to a knowledge of acute diseases, of their nature, character, and mode of treatment, of which many of the oldest countries of Europe cannot boast. But when we turn our attention to the various chronic forms of disease, then we must pause, and however painful the concession may be, must with candour acknowledge that our transatlantic brethren have greatly excelled us in the investigation of their real nature. This imperfection would appear to depend on the disastrous fashion, which, ever since the days of our illustrious Rush, has prevailed in this country, among his disciples, of treating *chronic* as well as *acute* maladies, *exclusively* on general principles; and on the almost total neglect of post mortem examinations.

However judicious it may be to treat acute diseases on general principles, and to modify our remedies according to the state of the general system only, still it must be confessed by all unprejudiced minds that chronic diseases, accompanied as they generally are, with so few of those general symptoms to which these principles can with advantage be

applied, offer us the fairest proof of the necessity of studying the nature of the local complaint ; the various alterations it induces in the tissues or organs ; the connection existing between the organic lesion and external symptoms, and above all the futility of such sweeping generalizations.

Accustomed as he was to view diseases as affecting the system at large ; regarding local derangements as effects instead of causes ; and neglecting the study of morbid anatomy, Dr. Rush knew little of the real nature of chronic diseases, and of the laws of inflammation and irritation. In order to illustrate this, we would call attention to his ideas concerning pulmonary consumption. If he had entertained correct views on the pathology of this disease, would he have asserted it to be the effect of debilitating causes, and in proof of this, call the attention to the fact that it arises from pneumony, hæmoptysis, catarrh, and other diseases of a similar nature ? Would he have maintained that this disease is one of the whole system, and that its cure is to be sought for in those remedies alone which act on the *whole system* ? That blood-letting is productive of advantage in this complaint, *merely by removing the troublesome symptoms of inflammatory diathesis*, and thereby enabling patients to use exercise and labour with advantage ? Would he have regarded the *consumptive fever* as an independent being, sometimes exciting its morbid action on the lungs, at others, on the trachea ? And, finally, would he have spoken of a *typhous* state of consumption, and recommend for its cure the almost exclusive use of powerful stimuli ? We answer in the negative. Had he adopted a different method of investigating diseases, and resorted more frequently than he did to the use of the scalpel, he would soon have discovered the fallacy of his views. But let us repeat it here, Dr. Rush, notwithstanding the erroneousness of many of his pathological notions, succeeded by virtue of his *coup d'œil*, and his long experience, in becoming a very successful practitioner. His ingenuity was remarkably great ; his eloquence captivating ; his erudition profound ; and on the

whole, he may with justice be regarded as one of the greatest men this country has produced.

Another cause we would advert to as retarding, among us, the knowledge of chronic disease ; we allude to the too prevailing fashion of seizing one particular symptom, directing our remediate resources towards it, and at the same time neglecting the local affection from which it originates. Limiting ourselves to hectic fever, how many remedies have not been recommended for its cure ? From the lancet, down to the most inert article of the *materia medica*, all have at different periods been extolled as possessing considerable power in arresting its progress ; and still a little attention would serve to convince any one acquainted with the nature of disease, that this state of febrile excitement, being the effect of a local irritation, cannot with reason be expected to be cured, until by proper remedies we have succeeded in removing the local disease itself.

In consideration, therefore, of the importance of attending more than we have hitherto done, to chronic disease ; and convinced that the only method of attaining a correct knowledge of their character and nature, is by frequent prosecution of morbid examinations, we would earnestly call the attention of our brethren to the necessity of adopting a method so successfully employed by Abercrombie, Hastings, Harrison, Broussais, Laennec, Bayle, &c. ; and in order to direct the mind to the subject of these diseases, we here offer some observations on the contents of the volume, the title of which we have presented above.

Dr. Berlioz remarks, very correctly, that " chronic diseases form one of the most important subjects presented to the meditations of physicians ; they comprehend at least one third of the maladies afflicting the human species ; and a knowledge of their character, of the crisis by which they terminate, of the causes which prevent this termination, is indispensably necessary, in order that we should be enabled to direct the treatment in a rational manner." These, consequently, are the points he endeavours to elucidate ; in

doing this, he has adhered closely to the questions proposed by the Medical Society of Montpellier, and as an answer to which the memoir under review had formerly been presented.

In entering upon the examination of the first question, namely, the distinctive character of chronic diseases, our author indulges in some observations on the sympathy uniting together the various parts of the human body ; and, aware of the evident relation existing between this sympathy and sensibility, it is in this latter that he thought proper to study it. "The study of the mutual relation," he says, "by which all the various parts of the animal system are linked together, offers us an inexhaustible source of inductions, useful both in the theory and practice of medicine. In the study of man, both in health and disease ; of physical and moral man, a knowledge of the laws of sympathy facilitates the investigation of the secondary causes of some of the vital phenomena, and furnishes us with a means of reproducing them. Its infinitely various effects present themselves, sometimes with a frightful assemblage of accidents, the intensity of which augments from one instant to another ; in other cases, with the increased excitement of a single organ. In one individual, this excitement is violent ; in another, it is the reverse. Here climate augments its activity ; there it diminishes its violence."

Next our author notices the various modifications which sympathy is susceptible of undergoing, from a difference in the tissues affected ; from want of due exercise, or from a total suspension in the functions of the organs ; from age and temperaments ; from temperature, climate, atmospheric constitutions, habits, modes of life ; from peculiarity in the mode of irritation affecting the organs, &c. &c. But want of room, more than want of inclination, will prevent us from noting the various observations and proofs with which he has elucidated the several points. We shall consequently go on to remark, that the variations in the state of sensibility, which occasion some so striking, in the progress of disease, and in the number and severity of their

accompanying symptoms, constitute, in the opinion of our author, the true character of chronic diseases, because these circumstances, in all instances, accompany them.

Dr. Berlioz does not think that diseases should be regarded as chronic, merely because they have continued a long time ; since *acute* diseases are sometimes weeks, and even months, before coming to a crisis, and chronic maladies prove fatal, or are cured, in some instances, after a few hours continuance. We entirely agree with our author in the opinion that duration is not, in general, of itself sufficient to constitute a disease either acute or chronic ; nevertheless, bearing in mind the hitherto uncertain value attached to this latter term, we cannot be ready to admit among chronic diseases, such affections as are capable of proving fatal or being cured in a few hours. Some writers of no little respectability have mentioned, that in the debility of the organization at large, we should search for the characteristic feature of chronic disease. Against this opinion, our author has adduced not a few able arguments, and conclusive facts. The success of the antiphlogistic treatment, in many cases of this form of disease, would of itself serve to demonstrate, that they do not always consist in general debility. But another proof of the erroneousness of such an opinion, he derives from the fatal consequences attending the use of stimulants in many chronic diseases of the chest and digestive tubes. It is, besides, a well known fact, that debility often accompanies acute as well as chronic diseases ; and that, according to the circumstances under which an individual is placed, and although his system be not previously debilitated, either of these two forms of disease will occur. Others have believed that the little variety existing in the symptoms, served to distinguish chronic from acute disease, and Dr. B. seems to incline to this latter opinion. In order to show, in a more particular manner, the modification in the vital properties, constituting the chronic form of disease, he establishes a parallel between this form and the acute, and compares their accompanying symptoms. In-

flammation of the lungs furnishes him with an example. "Examine," he says, "this man affected with acute pneumony. See what a combination of symptoms! general excitement in the circulation; pain in the head; delirium; burning heat; high coloured urine; nausea; anxiety; continual agitation; prostration of strength; difficult respiration; painful cough. Compare this other man affected with the same disease in the same organ, but under the chronic form. The cough and difficulty of breathing, namely, those accidents depending on the lesion of the lungs are the only ones which cause fatigue. Sleep is only prevented by the cough; the appetite is often good; the muscular movements are performed; the mind remains clear, and most of the secretions are little deranged from their natural condition, so long as a fatal termination is not very near." In the former case, the disorder is universal; in the latter, it is confined to those organs only that are under the immediate control of the diseased one. In the former, the activity of the general sympathy is augmented; in the latter, this vital property is in a state of torpor, and the same, according to our author, will be found to be always the case, if we compare with the acute disease of an organ, the chronic form of the same affection in the same organ.

Dr. B. remarks, that as several degrees are observed to exist in acute diseases, so, they are likewise found in the chronic form. The former is not accompanied, in all cases, with irritation of all the tissues, nor the latter, in all instances, perfectly isolated: it is sometimes attended with febrile reaction. Fever he regards, and we believe very correctly, as the effect of an irritation transmitted from the affected organ to the circulatory system, and not, as maintained by Sydenham, an effort on the part of nature to prolong life. The supervention of fever in chronic disease may, he thinks, prove beneficial, because by being communicated to various organs, irritation is necessarily weakened, either by the effect of its own duration, or by the results to which it contributes in giving rise to crises. On the

contrary, when it proves fatal, the sympathetic communication which gives rise to it, wastes the vital energy, or destroys the tissue of the organs.

But according to Dr. B., the most manifest difference found to exist between the acute and chronic forms, is the manner in which sympathetic affections are developed. In the former, the *general* sympathy exercises the greatest power, whilst in the latter, it is the *local* sympathy which predominates; or in other words, in the acute form the reaction becomes general, and the various organs become affected through the power of this reaction; whereas, in the chronic form, the diseased organ communicates irritation, independently of the general reaction, to those organs with which it sympathises more particularly. Consequently, in the opinion of our author, the absence of symptoms of general reaction constitute the character of chronic diseases.

It must be confessed by all, that there exists some appearance of truth in this doctrine, since most cases of chronic disease are unaccompanied by general symptoms; but at the same time it will be acknowledged that, by Dr. B., it has been carried rather beyond its proper limits. Many diseases evidently chronic, are attended with symptoms of general disorder in the system; and phthisis pulmonalis furnishes us with an example well calculated to prove the correctness of this assertion. Notwithstanding the quick pulse, heat of skin, disorder in the secretions, &c. found to exist in the great majority of such cases, no one, we believe, would feel disposed to consider them acute, after they have continued months and even years. The whole tribe of nervous complaints are chronic; nevertheless, the general sympathies are not found inactive in them.

On the other hand, in diseases evidently acute, symptoms of general reaction are not always apparent. In yellow fever, which assuredly no one will attempt to denominate a chronic disease, we find some cases to proceed to a fatal termination, without manifesting the least reaction in the system. Apoplexy, and all diseases in which the functions

of the brain are suspended, are undoubtedly acute ; nevertheless, in them the general sympathy is not found to possess much activity. The opinion of Dr. B. therefore, is erroneous, only because it is too general and exclusive, and until further observation demonstrate the existence of some difference between acute and chronic diseases, more conclusive than that derived from the greater or lesser activity of the general reaction, we shall be warranted in maintaining that they differ in some measure, though not exclusively, in respect to their duration. We now pass on to examine the second question, namely, *the critical terminations of chronic diseases*.

In entering on this subject, our author says, that " having ascertained the character of chronic diseases, it will be easy to perceive that their critical solutions must be more rare, and more difficult than in the acute form. In these latter, all the organs, the functions of which have been deranged, can, as well as that which is the seat of the disease, contribute to the cure, by the expulsion of the products of the irritation." It will be easily discovered from this quotation, that the whole of his reasoning in this chapter, will be grounded on the view he has taken of the character of chronic maladies. Thus, he adds, " in chronic diseases, the general sympathy being diminished, cannot solicit with sufficient force the different tissues, in order that they should participate in the movements of irritation, and thus contribute, by a combination of crises, to the termination of the disease. This affected organ, the tissue of which is in many cases altered, contributes with difficulty to its own deliverance. It nevertheless operates some crisis more or less various, in portions of the system or tissue of which it constitutes a part." We have already, we believe, shown that the opinion embraced by Dr. B., respecting the characteristic difference existing between acute and chronic diseases, was far from correct, and we therefore need not say that the conclusion he arrives at in the chapter now under review, must inevitably share a similar fate, since they are

established on the supposed correctness of those contained in the former. Notwithstanding this, however, we shall examine the various remarks he makes on the subject of crisis. It is one of the utmost importance, and we only regret that it has not received, in the present work, that degree of attention which it so highly deserves; for the author has neglected to notice the various diseases to which each corresponds; the symptoms by which they may be foreseen, or the period at which they generally appear; all of which are subjects highly interesting in a therapeutical point of view. But to proceed:

Chronic diseases sometimes terminate by the evacuation of the product of the irritation. In enumerating the different manners in which such evacuations take place, Dr. B. remarks, that when the matter accumulates in form of purulent congestions on the surface of the body, their seat is determined not so much by the vital energy of the part as by gravitation; but that, nevertheless, in the greater majority of these cases, "the vital energies have manifested some preliminary influence on the mechanical crisis, by the adhesions which the contiguous tissues have contracted, and which have favoured the discharge of the fluids."

Chronic diseases may likewise terminate by a diffusion in the neighbouring organs of the morbid excitement; thus vomiting has been known to cure a diarrhœa. But this species of termination more frequently happens, when the disease is situated in some of the branches of the sanguiferous system. Moreover, functions under the immediate control of the circulatory system, may prove critical, in general as well as local diseases. Thus copious sweats have been known to cure hæmorrhagies. From this it naturally follows, therefore, that the circulatory system will sympathise more powerfully than any other, with the different kinds of vessels, arterial, or venous and capillary, of which it is constituted, and that hæmorrhagies will be found to constitute a common crisis in chronic diseases. This, which, in a majority of instances will be found to hold good, ceases never-

theless, to prove correct in others. Nor do we find all hæmorrhages supervening in chronic diseases to prove beneficial, or even harmless. Those from the lungs and stomach are always attended with danger, and if not arrested soon, will be followed by the most serious consequences. "Spitting of blood," says Dr. B. "is attended with more danger than real advantages; nevertheless, it may happen that a varicose vessel being ruptured in the lungs, or posterior part of the mouth, the hæmorrhage which results will aid in the removal of the disease of the chest. At any rate, in chronic affections of this cavity, hæmoptysis is as frequently critical as in the acute form."

"In chronic diseases," says our author, "local sympathies occurring, as they do in a special manner, indirect crises take place, and the organ united by a particular sympathy, or by movements of association with the affected part, contributes to the the solution of the disease." Thus morbid action is transmitted from the organs of generation to the lungs; from these latter to the anus, &c. Diseases of the mucous membranes terminate in some cases by the transmission of the irritation from one part of their surface to another, in which latter it finally ends. The movements of association by which the secretory and excretory functions are linked together, excite sometimes in the kidneys critical efforts, by which the disease is brought to a termination. Thus internal collections of pus have been known to be wholly or in part evacuated with the urine. Our author should recollect, however, that such evacuations may be brought on by the deposition of this matter in the bladder or pelvis of the kidney, through the medium of adhesion and ulceration, in a similar way that abscesses of the liver open into the intestines. Idiosyncrasy, in many cases, favours the translation of pus, or other vitiated humours, to different parts, and thus form accidental crises which are referable to no general rule.

"The termination of chronic diseases by metastasis, or the change from a severe state of disease to one of a more

mild nature, constitutes a kind of critical solution, examples of which are numerous." Such, for example, are abdominal diseases which are cured on the appearance of the different kinds of cutaneous affections. Quartan fevers have been removed by the itch; violent coughs and vomiting have been relieved and cured by tetter, &c. Pouteau mentions a case of cancer of the breast cured on the supervention of an abscess on the leg.

The several terminations of chronic diseases we have noticed, are slow in their progress, and in general effected without much trouble or danger. "Things are very different," says Dr. B. "when the general sympathy is called into action, when fever supervenes, and the disease assumes the acute form. In such cases the organization at large soon takes part in the supervening operations; the sensibility of all the tissues is solicited; the circulation of the fluids becomes accelerated in all the different orders of vessels; numerous crises may be effected by means of those organs that have participated in the irritation; the vital energy may return to its natural condition, and a quick termination of the disease supervene."

Dr. B. very judiciously remarks, however, that when fever is not decidedly useful in chronic diseases, and does not effect their cure, it proves hurtful by causing an unnecessary expenditure of the vital principle.

The several revolutions supervening in the system, at different periods of life, are productive of crises, which, in all cases, prove salutary; and it has been remarked, that each age has its peculiar crisis for the removal of chronic diseases. The various modifications of the temperature of the seasons, contribute in some cases to the solution of these affections. Hippocrates assures us that those maladies that are aggravated during winter, are necessarily cured in summer, and vice versa. And certain it is, that coughs, some species of asthma, gout, and rheumatism, are benefited by the heat of summer.

Causes of the slow progress of chronic diseases and of the

difficulty of their terminations.—It must have been observed by the generality of our readers, that the different parts of which this memoir is composed are linked together in such a way, that the arguments contained in the one serve as an answer to propositions advanced in the other, and the reasonings found in the latter are grounded on the opinions adopted in that which preceded. From the manner therefore in which Dr. B. had viewed chronic diseases, his opinion concerning the causes of their slow progress and difficult termination must already have been anticipated. He attributes them to the feebleness of the general sympathy, and to the consequent limited number of their critical movements, by which the disease is made to continue a very long time, unless the irritation tends to destroy with rapidity the function of the organ in which it is situated. Chronic diseases in general are of a complicated nature; which, according to our author, arises from the activity existing in the local sympathies, occasioned by the feebleness of general sympathy. Thus the activity of the former, derives additional energy from the weakness of the latter, and in a short time the alterations are communicated to all in order of associated movements. These numerous combinations tend, by loosening more and more the chain of associated actions by which the vital movements are linked together, to retard the progress of the disease, and render its termination more difficult. The power of habit, likewise, tends to offer an obstacle to the progress of chronic diseases; and this cause acquires additional force, in proportion to the length of time the disease has continued. From all this, our author concludes, that the causes of the slowness and of the difficult termination of chronic diseases, are to be sought for in the numerous complications which they present, and in the force of habit.

We must repeat here, what we have already said, that Dr. B. having failed to establish the solidity of his opinion concerning the characteristic differences between acute and chronic diseases, his subsequent reasonings necessarily

fall to the ground, since they are made with a supposition of the correctness of the former, and in fact are grounded upon them. Had he viewed the character of chronic diseases in a less exclusive manner, and not attributed the limited number of critical movements of which they are susceptible, to a want of energy in the general reaction, he would not have neglected to notice the fact that chronic diseases, depending as they do for the most part on a disorganization of the tissues; and nature or art being in general inadequate to the task of removing these organic lesions, they will be found to undergo few critical movements capable of effecting their cure; and that on this cause, more than on a complication in the affected organs or on the force of habit, depend the slowness of their progress, and the difficulty of their termination. Some diseases, likewise, are chronic, slow in their progress, and difficult of cure, owing to the nature of the tissue in which they are situated, and others are chronic because, from their very essence, they cannot be otherwise. Of the former—Irritation of the bones, and of the lymphatic system are for the most part slow; this last never is acute unless the capillary red vessels partake in the diseased action. Scrophula, when inherited, serves as an illustration of the latter; and is seldom eradicated from the system unless a radical change be effected in the constitution of the individual.

We shall now proceed to examine the most interesting part of the work, namely, the Treatment of chronic diseases.

Before entering directly on the history of the general treatment applicable to chronic diseases, Dr. B. indulges in some general remarks. He insists, and we believe with reason, on the necessity of putting an immediate stop to the progress of these maladies, even, if possible, from their very commencement, in order to diminish, as much as we can, the force of habit. This should always be attempted before disorganization of the tissues takes place; but when the disease is inveterate and of long continuance, Dr. B. is

of opinion it would be useless, and even hazardous, unless the cause be entirely removed, to attempt a too sudden cure ; and in avoiding this, we would act in accordance with a well known law of nature, by which an individual is not allowed to undergo, without danger, sudden changes in the regular movements of his economy.

In the cure of all diseases, acute as well as chronic, a knowledge of the cause is of absolute necessity. It is especially so to those who undertake the treatment of the latter. " If in some cases," says Dr. B. " a remedy, injudiciously administered, occasions a beneficial revolution in the system, by displacing the irritation, we must attach little dependence on such success, and error becomes very dangerous when our object is to combat a chronic inflammation." It is likewise of absolute necessity not to mistake effects for causes, and to avoid the illusion occasioned by sympathetic symptoms, which may mask the principal disease and cause it to be overlooked.

Our author, with great propriety, divides the causes of chronic diseases into physical and moral ; and lays great stress on the necessity of attending, in practice, to this division, since remedies, found beneficial against accidents arising from physical impressions, are far from being applicable to those originating from affections of the mind. For the removal of these latter, moral means alone should be had recourse to, unless, indeed, from their long continuance they have become productive of organic derangements, for in such cases, we must apply those remedies found useful in primary lesions of the physical system.

Nature enjoys little power in the cure of chronic diseases ; nevertheless she sometimes makes some efforts to re-establish equilibrium in the system, and these should never be overlooked by the physician. Before adopting an active treatment, he should examine whether the increase of an excretion or of a secretion produces relief ; in that case it becomes his duty to endeavour to aid nature in her efforts ; for the same means, especially those of an indirect nature, are

not possessed, in all cases, of the same degree of efficacy. Sometimes diuretics will prove useful and must be employed ; at others, purgatives or exutories.

After paying regard to the above circumstances, we must attack the disease directly in its seat ; because the danger of calling into action the general sympathy, together with combinations in the disease, which may ensue from the too great activity of the local sympathies, render the *indirect* method the least advantageous of all. Our author consequently recommends the employment of specific remedies, or such as appear to possess this quality ; without neglecting, however, to combine them according to circumstances, with medicines, the properties of which are not so satisfactorily ascertained ; because, as he observes, "the different degrees of irritation form, in the same organ, different diseases, in the same way that different proportions in the materials of a compound, give rise to mixtures possessing different properties." And therefore many remedies would be necessary in order to combat the various modifications of the morbid sensibility, were not their exact application found often impossible in the present state of our knowledge.

From this it would appear evident that Dr. Berlioz, rejecting almost entirely the idea of specifics of disease, admits only specifics of organs, and we must confess, that we are ready to subscribe to this doctrine. In order to regard some medicines as manifesting a specific action on some particular *disease*, it is of absolute necessity that we should recognise in these latter a *specific* nature ; which opinion we are far from admitting as correct. The late rapid improvements made in physiology and pathology, no longer permit us to regard these antiquated notions as possessing the least shadow of truth, and force us to consider diseases as varying only as they are found to be seated in different tissues or organs. The irritation which, when situated in the smaller joints, we denominate gout, certainly does not retain its own specific nature when translated to the stomach. The irritation of the urethra constituting the gonorrhœa of systematic

writers, does not retain the specific character of gonorrhœa when transmitted to the testicles; scrophula is no longer scrophula when the irritation of the lymphatic system, by which it is constituted, is transformed to some other tissue, and such we believe is the case in all diseases with which we are liable to be attacked. But if we deny the existence of *specific* diseases, and consequently specifics of disease, we have admitted those of organs and tissues, and daily observations confirm us in this opinion; thus cantharides possess affinity for, and act in a special manner on, the neck of the bladder; balsam copaiva on the mucous membranes; ergot on the uterus, &c. Some medicines act more particularly on the kidneys, others on the intestines.

We are perfectly aware that many may allege, as an argument against the correctness of our views, that some causes, producing in all cases, when applied to the system, the same train of effects, must be regarded as possessing something specific; and that, consequently, the disease arising from their action must be considered in the same light. Thus the matter of small-pox will always produce small-pox—the vaccine matter, the vaccine disease—and the venereal matter, the venereal disease. We are far from denying the fact, that certain causes are productive of effects on the system, for the most part the same; we merely contend that diseases do not owe their characteristic differences to peculiar *virus*. If we admit that different stimuli possess affinities for different tissues or organs, (and we believe few will not maintain a different opinion,) why should we have recourse to so unphilosophical a mode of reasoning in order to account for the difference existing in disease? In our candid opinion it is much more rational to refer this *specific* character of a disease, to the *specific* nature of the tissue for which the cause has manifested an affinity, than to believe it to arise from the presence in the system of a peculiar essence, which can never be rendered appreciable to the senses. Irritation and inflammation, as situated in the various tissues of the body, presents phenomena totally distinct from

each other; and, in the present state of the science, we should betray great ignorance in pathology were we to regard these various phenomena as constituting diseases essentially different. The golden age of the theory of *virus*, like the reign of Saturn over mortals, has passed away; the gouty—rheumatic—the cancerous—scrophulous—scorbutic—herpetic—ipsoric, have been consigned to oblivion. Already Jourdan, in his essays, has caused the syphilitic to share a similar fate, and we dare hope that ere long the minds of physicians will be directed to the examination of diseases as they affect the different tissues, and to abandon altogether the antiquated notion of specific *virus*.

With regard to Dr. B.'s remarks relative to the different degrees of irritation producing in the same organ different diseases, we are of opinion they are correct; the different grades of fevers, from the simple remittent to the most violent continued, all arising from an irritation or inflammation of the mucous surfaces of the stomach and intestines, (for such is our idea of the pathology of this disease,) present themselves as a proof of the correctness of this opinion.

According to Dr. Berlioz, "chronic diseases, when examined in the solids, depend on atony, inflammation or irritation. When situated in the fluids they depend on the same causes, and, moreover, sometimes on an alteration in their constituent parts which removes them from their natural condition." And having established this division, he proceeds to treat of the means applicable to the treatment of diseases as they affect different systems and organs. The opinions of our author relative to the nature of chronic maladies, savour very much of the Brunonian doctrines, so prevalent in some of the schools of Europe, and had he not located some of these affections in the fluids, we should pronounce them precisely similar to those entertained by the Edinburgh innovator. Were it necessary to seek for further proofs of this coincidence in their opinions, we could discover one in the division which he makes of irritation into sthenic and asthenic. To us this distinction seems unfounded, and inflammation

or irritation we believe always of the former character. The complication of local irritation or inflammation with an adynamic state of system, supposing it more frequent than it really is, (for many of these cases of adynamia are only the effects of the violence of the inflammation), could only prove the possibility of the fact, that whilst one part of the system is morbidly excited, the rest of the economy is thrown into a state of debility, and not at all that the inflammation itself was asthenic; nor can the cure of inflammation by stimulants, either general or local, prove it to be of an asthenic nature; since these, it must be acknowledged, act, for the most part, as revulsive, and are productive of beneficial effects by virtue of the counter-irritations they occasion. But, in many cases attended with general debility, the use of stimulating remedies is hurtful, by occasioning an increase in the inflammation. Our author himself allows that the *asthenic* irritation often refuses itself to a treatment suitable to pure debility. "Often," he says, "the irritated and debilitated organs will not bear the employment of stimulants which increase the afflux of blood in vessels no longer possessing sufficient force to make it circulate."

Dr. B. remarks, in the progress of his memoir, that chronic diseases, caused by the exaltation of the sanguiferous system, are to be treated by evacuations of blood, except in those cases where the debility of the patient inspires fear. In such, he regards cold applications as preferable, inasmuch as they diminish both the morbid sensibility which keeps up the irritation, and the heat which rarefies the fluids and causes distention; astringents are likewise beneficially used in these cases. When the disease is deep-seated, digitalis should be employed. From its power in retarding the circulation, it proves extremely proper in preventing the too rapid flow of blood in large vessels threatened with aneurism; and also in diminishing the fulness of the capillary system, when tending to inflammation. In lymphatic indurations, however, complicated with sanguine engorgement,

the use of digitalis is attended with no advantage, and in such cases the most strict and long continued low diet should be had recourse to, in order to diminish the mass of fluids circulating in the affected part, and augment, by starving the lymphatic vessels, the process of absorption. This system of starvation has been attended, in some of those obstinate cases of chronic diseases which present themselves occasionally to the observations of physicians, with the most extraordinary success. Independently of the well known cures of aneurism performed by means of it by Valsalva and others, we might have adduced, in testimony of its beneficial powers, many others no less striking and conclusive. Broussais has cured chronic gastritis of seven and ten years continuance with pure water; no other nourishment being allowed during the space of sixty days, (*Leçons*, p. 183); and Riverius (*Opera*, in fol. p. 574), mentions the case of a young woman affected with gutta serena, who resolved to kill herself by starving. She persisted in her design for the space of a year, taking only a small quantity of broth and wine through the entreaties and prayers of her parents. Having reached a state of extreme leanness, she recovered her sight, and her health was soon restored under the use of proper nourishment.

After noticing some varieties of what he considers to be the *asthenic* state of the sanguine vessels, both general and local, speaking of the debility of the lymphatic system, in which he very improperly, we believe, locates syphilis—of some of the chronic cutaneous diseases, and recommending a treatment suitable to the view he has adopted of their nature. Dr. B. says, "In the present state of our medical knowledge, it is difficult to treat, by the direct method, diseases arising from the exaltation of muscular action. Fortunately, idiopathic affections of this nature are not common, for a great number of convulsive diseases arise from an irritation situated in the brain and spinal marrow." This we regard as correct; most, if not all, convulsive affections being the effect of this latter cause; and sometimes of irritation of

stomach and bowels, as our author ought not to have neglected to notice. We must confess, however, that when he tells us that convulsions, when idiopathic, arise from a diminution of strength in the other systems, by which action is made to predominate in the muscular system, and presents us, as an illustration of this species of convulsions, those arising from profuse menorrhagies, we are not disposed to concede to him the correctness of his views. These latter cases are, in our opinion, the product of an over-excitement of the brain and nervous system, and not, as he maintains, the effect of the want of equilibrium between the muscular and other systems of the body. An attentive examination of the phenomena of hemorrhagies convinced us that this latter explanation is far from satisfactory. In a profuse loss of blood, the muscular system is as much debilitated as the other systems of the economy, and, perhaps, comparatively more, since so soon as blood is drawn off in too large quantity, the heart, brain, lungs, and stomach, having thereby lost their necessary proportion of stimulus, nature in her efforts to prolong life, calls to these latter organs, those fluids that still remain in the secondary organs. In the present state of physiology, we cannot admit these phenomena to take place through the medium of any power but that of increased absorption, both by the lymphatics and venous radicals. "But," says Mr. Broussais, (*Examen*. vol. i. p. 116,) "if the absorbents and the veins are thus animated, is it possible that they should be so, without a considerable increase of their nervous power? and is it not the plexures which surround the vessels and follow them in their most minute ramifications, that are the agents of these increased movements? All the centripetal vessels—all the nerves by which they are surrounded and animated, vibrate thus tumultuously towards the centre, are you very certain that these increased vibrations will not, when they reach the place of rendezvous, excite the action of the cerebral nerves to such a degree as to produce convulsions?"

And are not such convulsions, as well as all others, the effect of over-excitement?"*

Dr. Berlioz, speaking of tetanus, remarks, that as carbonic acid gas, when taken into the lungs, has the effect of debilitating and destroying muscular action, it might, perhaps, be advantageous to excite a momentary asphyxia in persons affected with this disease. This remedy would, we believe, prove a dangerous one, even in the *essential* tetanus, if there exist such a disease, from the difficulty of administering the gas to the quantity sufficient to attain the object intended, without, however, placing the life of the patient in jeopardy. But in those cases of tetanus which arise from irritation of tissues, or from wounds, it would offer, we imagine, no great prospect of success.

On the subject of gout, our author remarks, that persons who take much exercise are not affected with it; and he goes on to say, "it would appear from this, that inaction disposes the joints and ligaments to experience an asthenic irritation, which is, in like manner, produced by the excessive use of excitants;" and speaking of rheumatism, which he regards also as a disease of debility, he says: "with respect to the specific treatment, it consists in producing a general excitement capable of being transmitted to the joints and to the debilitated muscles." He accordingly recommends the free use of bark, or of the red hydro-sulphuret of antimony, as extolled by Giannini. On the nature of gout and rheumatism we shall now enter. We believe, however, that the Brunonian theories on these diseases are, at this present

* In the experiments of Seeds, and in some performed a few months since in this city, it has been shown that in animals bled to death, engorgements and serous effusions in the brain have been discovered on dissection, and likewise considerable redness of the capillary system of the digestive tubes. These experiments, therefore, though intended to overthrow some parts of the doctrine of Dr. Broussais, and presented by some of the medical men of our city as fully adequate to that purpose, tend, nevertheless, to lend support to the opinion of that celebrated pathologist respecting the true nature of convulsions from loss of blood.

time, pretty generally exploded, and that the remedies found beneficial in them are not always derived from the class of excitants, as our author appears inclined to think. We consequently pass on to notice some of his remarks on diseases of the nervous system.

“With respect,” he says, “to chronic diseases attended with increase of strength, they are not more frequently located in the nervous, than in the other systems of the economy;” those of an opposite nature, on the contrary, he regards as very numerous. In the former the proper remedies, according to him, are the debilitating passions as employed with so much advantage by Boërhaave in the hospital at Harlem—cold, which, according to Hippocrates, is an enemy of the brain and spinal marrow—azotic gas, which, owing to the sensation of debility it occasions when inspired, might, perhaps, be employed with advantage in these cases. In nervous diseases of an asthenic nature, remedies contrary to the above must be had recourse to—lively passions—an agreeable temperature—warm bath—electricity—acupuncture, &c.—and, according to the modifications observed in the several cases, bark and other tonics and aromatic substances,—opium—belladonna—colombo—oxide of bismuth, must be employed. These latter manifest a specific action on the nerves of the stomach and intestines. When the nervous debility diminishes the force of muscular action, without, however, entirely destroying it, violent exercise of the part affected will sometimes succeed in reanimating its sensibility. Thus the exercise of sawing will serve to strengthen the superior extremities—riding or walking, the inferior. “But where paralysis is complete, hot mineral shower-baths are almost the only remedy. Nevertheless, when involuntary contractions are observed to occur in the paralyzed members, it is a sign that electrical commotions will be employed with advantage, because the excitability of the part from irritation is not destroyed, although it no longer obeys to volition or sensation.”

Next, our author, passing from diseases as they attack

the different systems of the economy separately, treats of morbid derangements of the organs, relatively to the functions which they perform. We shall not follow him in the minute details into which he enters, but merely mention, that among the different affections which he regards as arising from a debility of the pulmonary system, he includes asthma. This we almost had anticipated, from the great attachment he invinces for the doctrines of Brown: but does asthma really arise from a debility of the respiratory organs? We answer in the negative. It has been proved, and by Bégin more especially (*Journal Complementary*, tom. 4. p. 1.) that it is to a lesion of the mucous membrane of the lungs we should attribute the phenomena of this malady, that this irritation is the cause or effect of the alteration of structure we discover in the lungs, pleuræ, heart, and larger vessels, of such as have died of the disease; and that this irritation is accompanied with spasmodic contraction of the glottis, from which arises a sensation of anxiety resulting from a defect of air—likewise painful efforts in the inspiratory power. Until, therefore, it can be proved, that irritation is the effect of debility, and not of over-excitement in the part diseased, we shall be warranted in concluding that asthma arises from this latter cause, and should not be included among the asthenic maladies.

Speaking of diseases of the alimentary canal, Dr. B. remarks very judiciously, that “no chronic disease presents itself more frequently to our notice than the inflammation of the stomach. When the tissue of that viscus has undergone a degree of disorganization evident to the touch, medicine offers no chance of success; but in the contrary state abstemious diet, and mucilaginous drinks, employed during a sufficient length of time, will with facility effect its cure.” There are few diseases meriting more to attract the attention of the physician than the chronic inflammation of the stomach, and in the treatment of which there exists more confusion. Under this head may, we believe, be included the various modifications of dyspepsia. Pinel, we are per-

fectly aware, has classed these latter diseases among the neuroses, and distinguished them from chronic inflammation of that organ; but their phenomena—the results of morbid examinations—and also the greater success of the antiphlogistic over the stimulating plan of treatment, prove him not to have located them in their proper place. Among the many chronic affections of the stomach, however, there is one which our author has adverted to, and which deserves to be noticed. “The sensibility of the stomach,” he says, “is likewise liable to be increased, without being in a state approaching to inflammation. It is a nervous susceptibility which does not call into action the sanguiferous system, and which, so far from being aggravated by aliments, is, on the contrary, sometimes relieved after eating.”

Bégin (*Physiologic Pathologique*, p. 242.) has very well described this affection. He observes that many persons are affected with this pain in the morning, and that it is dissipated after breakfast; it again appears, and is in like manner removed after eating. “It is sometimes very acute; but digestion is not affected; the aliments are received with pleasure; their assimilation is perfect, and their presence causes a return of the most complete calm.” In the cure of this affection Dr. Berlioz considers opium to manifest specific action, and recommends it to be administered on every accession of the pain; he likewise employs alcoholic or ethereal substances, and cold applications to the epigastric regions.

We reluctantly pass over his remarks on chronic diseases of the intestines and abdominal organs, also on those of the urinary apparatus. Want of room will not permit us to indulge in such minutiae; and we consequently now go on to offer some observations on the *indirect* mode of treating chronic maladies. This method of treatment is grounded on the development of contiguous, continuous, and remote sympathies, and on the re-establishment of the general sympathy.

We act on contiguous sympathy by means of stimulating

remedies applied to the skin covering the affected organ. The ointment of Arthanita vomits, purges, or excites the flow of urine according as it is applied on the region of the stomach, intestines, or bladder. (Barthez.) Setons and issues, either by translating the irritation from the diseased parts, or affording an issue to vitiated fluids, are very beneficial in chronic disease. Applications with tincture of cantharides, and the actual cautery, are likewise employed in some cases with success. "Idiopathic epilepsy, one of those diseases that prove a reproach to the art of medicine, offers, when inveterate, no chance of cure, unless it be by means of the application of actual cautery." It should be applied on the back part of the neck. To enumerate all the various cases in which it becomes necessary to excite local sympathies, in order to cure chronic diseases, is necessary. A little reflection will suffice, in order to convince us that the remedies to be employed for this purpose are, for the most part, included in the class of stimulants. "The irritation of the pituitary membrane furnishes us with a useful means in the cure of amaurosis and cephalitis. Bougies introduced in the urethra, will perhaps arrest pulmonary catarrh, and the application of vinegar to the scrotum, will put a stop to hæmoptysis, in the same way that the external irritation of the parotids will remedy the affections of the genital organs." Internal stimulants are sometimes employed with evident advantage. Owing to the innumerable sympathies which the stomach exercises with all the tissues of the economy, these remedies, when introduced into that organ, modify powerfully their sensibility, and thereby prove useful in the cure of chronic diseases.

But even among these, a choice is necessary to be made, according to the circumstances of the case. Purgatives will be found beneficial in some instances, whilst in others diuretics will prove most advantageous. In many cases, sudorifics are employed with great success ; in others again, astringents, tonics, and stimuli, will prove highly beneficial, "When the disease is the effect of the repercussion of an

acid humour, the first indication is to recall it to the surface ; but we must not employ indifferently any irritant, in order to attain this end ; there are some applicable to every circumstance. Thus, pediluvia rendered stimulating by means of sea salt or muriatic acid, are more useful than any other topical application, to bring back the gout to the inferior extremities. When the disease arises from the retrocession of a tetter, sinapisms are more advantageous than blisters ; and these merit the preference, if there existed before, in some parts, an ulcer, or a purulent secretion ; whilst, on the contrary, frictions made with the ointment of Autenhieth, or with a solution of tartar emetic in boiling water, fulfil the indications better, if the itch has been reperculated."

After speaking at some length of the advantages that may be derived from the excitement of local sympathies, in the cure of chronic maladies ; of the influence which the uterus exercises over the economy of the woman, and of the utility of attending to its innumerable sympathies, in the treatment of many of their disorders ; of the advantages of paying regard to the correspondence of the cellular tissue, in the application of external irritants ; of the introduction of medicines in the system by means of cuticular absorption, as recommended by Chrestien ; and of the necessity of attending to the influence of moral affections in the cure of bodily diseases ; our author goes on to treat of the means proper to be employed, in order to call into play the general sympathy, and of the utility likely to be derived from this method, in the cure of chronic maladies. But before adopting this plan of treatment, it is necessary to ascertain "whether the vital energy still remains sufficiently powerful to sustain the shock produced by an acute disease ; if the tissues of the organs will offer sufficient resistance not to be torn, or disorganized by the abundance of fluids which, owing to its greater activity, the circulation causes to flow to it. Having ascertained that there is no danger to be apprehended from the febrile excitement, we must select the most proper means in order to produce it." In this situation we must

tient, by the unprincipled administration of their different medicines, that they owe their success ; and if, in the hands of these illegitimate disciples of Esculapius, this mode of treatment is sometimes found beneficial, how much more frequently successful does not it promise to be, when applied under the direction of a skilful physician. Dr. Berlioz, therefore, has, we believe, done well to recall to the attention of practitioners this old and long forgotten method, in cases offering no rational prospects of success from the more common and systematic plans of treatment.

Change of climate contributes in not a small degree to the cure of some chronic maladies. Long continued and inveterate catarrhal affections among the inhabitants of the north lead to phthisis, unless the patient removes to a warmer and purer atmosphere ; whilst on the contrary, when the stomach rejects all aliments, and refuses itself to dilatation (which announces a chronic gastritis), in a subject of an irritable and robust habit, who betrays no predisposition to pulmonic disease, a journey to a colder region proves advantageous.

Medicine cannot in all cases effect a cure ; but there are few cases only in which she does not offer the means of palliating the sufferings of the patient. In the most desperate cases of chronic disease, there exist some secondary accidents which contribute to aggravate the sufferings. The weight of the waters, and the distention it occasions torment in a high degree the dropsical patient, and it becomes our duty to remove them if possible. Paracentesis and incisions through the skin are in such cases very beneficial. The derangement of the circulation caused by aneurisms occasion in some cases a suppression of urine and an hydrothorax, in which diuretics afford relief. Sometimes a collection of foul matter in the *prima viæ*, which purgatives evacuate with evident advantage ; at other times a sanguine turgescence in the head, lungs and liver, which is relieved by evacuations of blood, appropriated to the existing circumstances of the case ; by warm pediluvia, and sometimes by blisters.

In all cases, irritation and pain are the first accidents to the removal of which attention should be directed. To this precaution few physicians attend, as may be proved by the practice usually adopted in cases of worms. "So soon," says Dr. B. "as the presence of these insects is suspected, it is common to resort to remedies the most active and the most proper to favour their expulsion; organs already greatly irritated, are more and more tormented, and accidents at first simply nervous are converted into inflammatory." In the correctness of these remarks we fully acquiesce. Worms appear to be, and we believe are, the effects of a deranged action in the mucous membrane of the stomach and intestines; and this deranged action, productive of that slimy secretion which we observe in all such cases, if not a pure irritation or inflammation, certainly bears it a close analogy, since it passes into it with great facility from the administration of the incendiary remedies so commonly and empirically prescribed for the removal of these insects. Bearing in mind the correctness of these observations, it will strike every one that before having recourse to that class of remedies called anthelmintics, we should examine whether the condition of the membrane on which they are to be applied is such as to allow of their administration. If the membrane is irritated, remedies proper to relieve this state should be employed; and if the worms, from their number, contribute to increase the excitement of the parts, the milder means should be used for their expulsion. But in general the former will suffice, and the worms will be evacuated so soon as the condition of the membrane which gave them birth has been removed. A proof that the worms are not always the cause of those accidents that have been attributed to them, is derived from the fact, that many cases are observed in which these accidents appear and are supposed to depend on the presence in the intestines of these parasitical animals, and which, notwithstanding the use of the most powerful remedies, never have been evacuated or discovered after death.

But we must here close our analysis of Dr. Berlioz's

Memoir on chronic disease. It has been extended much further than we at first intended, owing to the difficulty we have experienced in condensing the great mass of matter of which it is composed. We had wished to present likewise a review of his memoir on evacuations of blood, but from want of room we are forced to postpone this to a future number of our Journal. We cannot, however, take leave of Dr. B. without expressing the satisfaction we have experienced in the perusal of his work. Although we found in some of the views he has adopted, subjects for animadversion, on the whole we think it an able production, and well calculated to do him credit.

Confessedly the situation of a reviewer is sometimes not a little embarrassing. Compelled, from the very nature of the duty imposed upon him, to search for and point out excellencies and defects, the greater number of these latter found in medical writers of the present age, crowding under his pen like the phantom inhabitants of the gloomy kingdom of Pluto on the Styx, make him appear in the eyes of many as directing all his efforts to collecting defects to the exclusion of beauties and excellencies, and thus deserving of the application of the ingenious fable of Boccalini, which, whether or not it can be found suited to us, we shall here transcribe and recommend to the careful attention of certain reviewers of our day. "A famous critic," says Boccalini, "having collected all the faults of a celebrated poet, presented them to Apollo. This god received them with his accustomed grace, and resolved to offer the author a recompense proportioned to the pains he had taken. With this intention he placed before him a portion of unsifted wheat, and ordered him to separate the grain from the chaff and to place them separately. The critic engaged in this new occupation with considerable industry and pleasure, and when he had completed the separation, Apollo presented him the *chaff* for his trouble."

ART. XIV. *A Treatise on the nature and treatment of Scrophula ; describing its connection with diseases of the Spine, Joints, Eyes, Glands, &c. founded on an essay to which the Jacksonian prize, for the year 1818, was adjudged by the Royal College of Surgeons in London.* By EUSEBIUS ARTHUR LLOYD, member of the Royal College of Surgeons, &c. London, 1821.

WHEN we consider the frequent occurrence and intractable nature of scrophula, we shall find it difficult to account for the great degree of apathy so long exhibited by our profession in regard to its progress. Physicians appear to have been satisfied by denominating it a hereditary disease, and by treating it with the most inefficient palliatives and unsuccessful regimen. The moment any one of its local manifestations is discovered, corroboratives are generally resorted to, without the slightest attention to the previous habits or constitution of the patient. By this treatment an inflammatory disposition is often superinduced upon the original complaint, which not only becomes thereby exasperated but also a source of great disturbance to the general health. The work under review, therefore, will be earnestly inquired of by our readers ; especially as it treats more extensively upon this subject than any other publication, and advances some opinions and modes of treatment which appear to deserve a respectful consideration.

Mr. Lloyd has divided the subject into two parts. "In the first part I shall treat of scrophula in general : of its characteristic signs, of its origin or causes ; and lastly, of its treatment, or the means we should employ to remove that peculiar state of constitution on which scrophula will be shown mainly to depend."

"In the second part I shall describe the *local* effects which this state of constitution produces, the particular changes

which take place in different structures, and the local treatment it is necessary that we should adopt."

In the first part of his treatise our author has by no means elucidated that peculiar state of the constitution which he supposes must always precede the development of the local symptoms of scrophula. Indeed it can hardly be expected that we shall ever discover the proximate cause of this disease, while so many of the healthy actions of animal life remain to be explained. By an attentive examination, however, we may trace backward the chain of morbid phenomena until we can anticipate, if we do not prevent, the evolution of the ultimate products of scrophulous action. It seems to be generally believed that a disordered condition of the lymphatic system is invariably connected with the appearance of this disease ; and our author imagines that a depraved state of the alimentary canal can always be detected as a still more immediate cause. The alternation of heat and cold, is assigned as another cause, which operating upon the external integument, must induce an irregular performance of the functions of that important organ. Impure air, and improper diet and clothing, must also be considered in connection with these circumstances, for they often prove the only apparent exciting causes of scrophula. Although Mr. Lloyd has not ascribed any order of succession to these precursors of the disease, we can experience no difficulty in anticipating what his opinion would have been had he favoured us with an explanation.

The vicissitudes of temperature, and insufficient clothing first derange the functions of the skin, which being intimately associated with those of the chylopoietic viscera, soon produce disorder in the digestive apparatus. An improper regimen acts still more directly upon the stomach and its relative organs. These predisposing causes of scrophula therefore appear to produce, as their immediate effect, an irregularity in the performance of digestion, which we all know is not unfrequently attended with important consequences in the whole living economy. We are not acquaint-

ed with the precise nature of this irregularity, nor does Mr. Lloyd undertake to point it out to us, although he speaks quite positively respecting its existence. We are equally ignorant of the manner in which a vitiated state of the alimentary canal introduces disorder into the lymphatic system, and still more of the mode of action by which these vessels can develop the effects of a strumous diathesis. If we give credit to the opinions of our author, however, as well as to those of the most accomplished physicians of the age, we must believe that such constitutional derangements do always precede the appearance of those various local affections to which the generic name of scrophula has so long and so vaguely been applied.

It is generally believed that this disease is necessarily connected with some congenital peculiarity of organization, or in other words, that it is always hereditary. Mr. Goodlad, however, with great propriety asserts, that the scrophulous diathesis may be superinduced upon a healthy constitution by the numerous remote causes which are usually designated in our elementary books. Mr. Hunter also adopted the same opinion, as will appear from the following passage. "In this country the tendency to scrophula arises from the climate, which is in many a predisposing cause, and only requires some derangement to become an immediate cause and produce the whole disease." (*Treatise on the Venereal disease*, p. 261). This is by no means an unimportant subject of investigation; and we regret that our author has not succeeded in his attempt to elucidate it. He has brought forward several interesting cases to prove that scrophula may be hereditary, which do not, however, authorise his general conclusion that such is always the fact. When opposite opinions are strongly contested by the advocates of each respective doctrine, there is generally some foundation in the arguments of both. Accordingly we have in the present case good reason to believe that a disposition to scrophula may be either hereditary, or acquired from various accidental circumstances to the influence of which the

individual may have been exposed. That it is not always hereditary we have sufficient evidence from the fact, that it frequently originates in individuals whose kindred have never been affected with a symptom of the disease. For our author's strongest proofs in favour of his own opinion we quote the following words :

“ But as a last, and I think I may assert positive proof of scrophula being hereditary, I will relate the two following cases. They occurred in the practice of Mr. Langstaff, and the morbid parts are preserved in his Museum.

“ A woman died of consumption in the last month of her pregnancy. Her body was examined after death, as well as that of the fœtus. Her lungs were found full of tubercles, some of which had suppurated and destroyed much of the substance of the lung ; in other respects the body was in a healthy state.

The lungs of the child, upon the thorax being opened, were found precisely in the same state as the mother's, being studded with scrophulous tubercles, some of which had suppurated. The rest of the body was in a natural state.

“ The next case is that of a woman who died also of consumption, a fortnight after her confinement. The child was still-born. Upon examining her lungs they were found to be in the same state as in the preceding case, being studded with tubercles, some of which had occasioned abscesses in the substance of the lungs. In other respects her body was free from disease.

“ The lungs of the child were in the same state, and the kidneys also had scrophulous tubercles in them.”

As hereditary diseases are peculiarly obstinate in their nature, we should naturally be led to expect that congenital scrophula would prove very unmanageable. The following fact will therefore become encouraging as well as interesting to the practitioner.

“ It is the case of a family in which there were eleven children, ten of whom and their mother died of phthisis, the

effect of tuberculated lungs. The eleventh, the eldest, however, remained free from the disease till she was between fifteen and sixteen. At this time she was seized with cough and expectoration of purulent matter, preceded by pain in her side, and accompanied with hectic and swelling of her ancles. The physician who had attended the rest of her family now saw her, and pronounced her precisely in the same state that they had been a short time previously to their deaths. She, however, after having been reduced to the greatest state of emaciation and debility, completely recovered, and has subsequently enjoyed an excellent state of health."

It will not be required of us to enumerate the great number of remote causes which are capable of exciting a disposition to scrophula in habits of a sound constitution. As the following passage from Dr. Thomson, however, conveys some useful information, we are induced to insert it. In his lectures he declares that scrophula "has been observed to occur in children who, *instead of being suckled at the breast of the mother, are fed with the spoon*; in others who, though suckled at the breast, have had only a scanty allowance of old and vitiated milk; and also very frequently in those who while young, could obtain only a watery vegetable aliment."

Symptomatology. What has been called the scrophulous temperament, is generally characterized by a great and unsatisfactory assemblage of distinctive symptoms. Mr. Lloyd has favoured us with a considerable improvement in this department of the subject.

"In the formation of our prognosis, the occurrence of this disease in more parts than one at the same time, materially assists us; but the peculiar appearance of the patient, or, if I may use the term, the physiognomonic signs, will, to the experienced and observant eye, be the most certain and unerring guide.

"The appearance of the countenance is really that of delicacy and languor; though to the common observer, from

the fulness, the peculiar smoothness, and beautiful colour of the cheeks, it is often that of the highest and most complete health. If, however, it be attentively observed, it will be found that the cheeks, though full and tumid, are softer and more flaccid than is natural to health ; and that, instead of being fixed and firm, they hang as it were loose on the face. There are, nevertheless, persons who have the greatest tendency to scrophula in whom none of these apparent signs of health exist, but whose complexions are peculiarly dull and pallid ; in these the appearance of delicacy and languor is even greater than in the former. In the former state the lips generally partake of the fulness of the face, and are of a beautiful red, while in the latter they are pale. It often happens too, that the parts about the mouth are of a peculiar dull pallid hue. There is also a remarkable appearance about the eyes, which cannot be accurately described ; but the conjunctiva is particularly free from blood-vessels, the pupil is generally much dilated, and the upper eyelid drops more than natural, to which, perhaps, as well as to the delicate state of habit, the dilatation of the pupil may be in some measure owing."

Among the symptoms indicating a disposition to scrophula, it has been already observed, that a fair complexion, and light hair and eyes are generally mentioned ; but he believes there are no legitimate grounds for such a distinction. Indeed, he is fully convinced, from a very extensive investigation of the subject, that persons of every variety of complexion are alike subject to this disease : and that it is only necessary to place them in circumstances favourable to its development, to have it fully established.

Constitutional treatment. Upon this subject his directions are valuable, and in some respects novel. Wherever a tendency to this disease is suspected he judiciously observes that, "our treatment will principally consist in avoiding or counteracting all the immediate or occasional causes." In the cure of scrophula, he directs our attention chiefly to the digestive organs, and recommends to remove all those cir-

cumstances which tend to disturb their functions, to tranquillize irritation, and to restore by means of alteratives their healthy train of actions.

To obviate the influence of sudden vicissitudes of temperature upon scrophulous patients, Mr. Lloyd very properly advises the use of flannel clothing next to the skin. The following cases which we extract from his book are very interesting.

“A young woman of very delicate health, who had had for several years the lymphatic glands of her neck diseased, and suppurating one after the other, and leaving ulcers difficult to heal, which were evidently of a scrophulous nature, was attacked with pain in her chest, and cough, which were very obstinate, and resisted all the usual remedies.

“After this, when it was believed that her cough was incurable, and that she was in a decline, she was recommended to clothe herself from head to foot in flannel, which she did; from that time her cough began to get better, and in a few months was quite well, as were all the swellings and ulcers in her neck, which had for some years resisted all the medical remedies that had been employed. No new medical treatment was made use of during this period, and all the medicines she took, were linctuses for her cough, and occasional doses of opening medicine. It is worthy of remark, that till she had recourse to additional clothing, she was particularly susceptible to colds, getting catarrh, sore throat, or inflamed eyes, on every trifling exposure to colder air than usual.

“The next case is that of a little delicate boy, who had strumous affection of the glands of his neck, and symptoms of tuberculated lungs, as hacking cough, and hurried respiration. These symptoms had existed for about two years, and during two seasons he had been at the sea side; but without receiving any positive benefit. He had also during this time made use of all the different specifics which are recommended for scrophula; but never acquiring more than temporary relief from any of the remedies, it was determin-

ed to try what would be the effect of warmer clothing than he had been accustomed to. He was therefore clothed in flannel, and his general clothing was so proportioned as to prevent the variations in the temperature of the air from having any sensible effect on his body.

"Under this treatment it was soon perceived that his health improved very much, and in a few months he had entirely lost his cough, and the enlargement of the glands of his neck had also disappeared.

"He has since this time, which is five years ago, remained perfectly free from the disease, and his general health has been extremely good. His diet during this time has been principally milk, which he prefers to any thing else, but he is not debarred from eating a little meat once a day. This is the whole of the medical treatment that was adopted, and surgically, nothing was done except keeping a piece of soap plaister to the swellings of the neck."

Respecting diet his directions are very minute and interesting. Although the subjects of this disease are generally very fond of stimulating food and drinks, he declares that these should always be carefully rejected. The meals "should be good and nourishing—as milk, eggs, arrow-root, meat jellies, &c. but of none of these should more be eaten at once than can be easily digested, and the meals should be taken at regular periods and after regular intervals, for nothing can be worse than living irregularly."

These directions, it should be observed, were given by the author only for a simple state of scrophulous constitution which is not suffering from severe local disease. In complicated cases wherein the topical affections have produced great irritation, exhaustion, and hectic fever; experience has taught him that a generous diet and stimulating drinks are not only admissible but useful.

He believes that good air and exercise are of course conducive to the cure of this disease, like all other circumstances which tend to promote the regular performance of the vital functions. But he condemns the indiscriminate

practice of sending all scrophulous patients to the sea shore. Indeed, he asserts that in general no material benefit will be derived from sending them there; and whenever this plan is adopted they should never be permitted to remain by the sea side more than four or five months. While there is only a disposition to scrophula existing, he admits that cold sea-bathing may become beneficial by rendering the body less susceptible of cold, and therefore less likely to be influenced by sudden changes of weather. But he reckons it altogether incapable of promoting the discussion of scrophulous tumours, or of healing the ulcers which proceed from them. He even denounces it in all cases where there is any reason to suspect the existence of internal derangements of structure. In cases of tubercles of the lungs he thinks cold bathing particularly injurious, and interdicts it altogether whenever the patient experiences the slightest symptoms of pulmonary irritation.

Of the use of warm bathing he does not appear to entertain a more favourable opinion.

“ I have not often witnessed the use of warm bathing in these complaints, but when I have, it has seemed to injure the general health. In one patient, who had scrophulous affection of the lungs, it was decidedly injurious, by hurrying the respiration, and quickening the pulse.”

Respecting the employment of medicinal agents his remarks are very judicious, and, corresponding with his opinions of the nature of the general disease, they are chiefly directed to the state of the alimentary canal.

“ The next point of importance in the treatment, is the keeping the bowels regular, and the hepatic secretions natural. The means that I would make use of for the accomplishment of this point are the following. If the patient be an adult, and the bowels obstinately confined, I would give him five grains of the blue pill, every night, and half a pint of Dec. Sarsæ. Co. twice a day; and if by a certain time of the day the bowels had not been open, I would give some opening medicine, and repeat it at certain periods until it

operated. This plan I should pursue till the bowels become regular, and then, to prevent their relapsing into the same state, I would continue the exhibition of alterative doses of mercury for an indefinite time ; and the form I would make us of would be the compound calomel pill, in doses of five grains every other night. If it be a child that is affected with this disease, the same principles would guide my practice ; but as the constitution, as well as the age of children who become affected with this disease may be very different, it is impossible to know at once what medicine will be applicable to each particular case. Indeed every one must have observed that the same medicine may act very differently on children of even the same age : and that what purges one violently will have no effect on another. We should too be very careful not to give violent purges, and we should particularly avoid large purgative doses of calomel, as I am convinced they often produce more general irritation than the evacuation they occasion from the bowels is able to relieve ; and that they often so much weaken the stomach, that it is a very long time before it is able to recover its natural powers. Our object, therefore, in prescribing medicines, should be to procure a proper emptying of the bowels daily, and a healthy condition of the digestions. This I admit is often a difficult point to obtain, but by proper management we may generally succeed. Any of the mild purgative medicines may be employed for this purpose, and if one does not appear to have the proper effect, we should desist from its use and substitute another ; but we may derive the greatest assistance from exhibiting alterative doses of calomel at the same time. The dose should be varied from half to one grain, according to the age and habit of the child, and repeated twice or thrice a week. Sometimes, in particular states of the stomach and bowels, it is better to combine the calomel with the purgative, and at other times they act better given separately. The very great influence which evacuations from the bowels have over the rest of the body cannot be denied by any impartial observer ;

it is therefore certain, that by increasing or diminishing them we are able to produce a decided effect on the whole, or, as I have proved before, on a particular part of the body. Thus, if there is much general irritation, or local irritation and inflammation, by increasing the intestinal evacuation, taking care, however, not to irritate the bowels, we may very much relieve both the one and the other. The importance therefore of attention to the state of the bowels is obvious.

“It will, however, be in vain to attempt to improve the state of the health, or to regulate the action of the bowels by any medicines we can administer, if, at the same time, the rules I have laid down for the diet be not observed. For if the stomach be overloaded with food, no proper digestion can take place, and if the food be of an improper quality, or in improper quantities, no medicines can act beneficially on the bowels.”

When the stomach becomes affected with acidities he recommends soda in small doses, to be administered “till the cause of the morbid secretion is removed.” In cases of weak stomach, with loss of appetite, he has found cinchona, steel, the mineral acids, and other tonics, to be serviceable, though he is perfectly satisfied that they possess no specific power over the disease. He is certain, however, that a great deal of mischief is often produced by the exhibition of these medicines in conjunction with a stimulating diet; and that diseases, which might otherwise be speedily relieved, are by these means rendered fatal to the patients.

PART II. *On the local effects of Scrophula.*

After the scrophulous constitution has once become established, there is no structure or organ of the body which may not be attacked by it, although experience teaches us that some parts are more obnoxious to its influence than others. Mr. Lloyd undertakes to delineate in the second part of his volume, the history of the various local effects

of scrophula as it develops itself in the lymphatic and other glands, in the female breast, the testicle, prostate gland, bones, joints, spine, hip, lungs, heart, liver, pancreas, spleen, intestines, kidneys, brain, and eyes. Notwithstanding this terrific number of locations, he encourages us with the assurance that the disease, when it occurs in a majority of them, is still within the reach of medicines. "It sometimes, however, happens that parts, the perfect state of which is necessary to the continuance of life, become attacked by this disease before proper means are had recourse to, to arrest its progress; and then, as is obvious, all the means we employ for the removal of the constitutional or local disorder, must generally fail; and it is, I believe, only under such circumstances, that we need ever despair of curing the disease."

Glands. When this disease locates itself in a lymphatic gland, the organ first becomes simply enlarged from thickening of its cellular texture, and its vessels continue pervious for a considerable space of time. As the affection progresses, the part appears to be supplied with more nutrient arteries, and to be redder than natural. Gradually it becomes wholly altered; new matter is deposited, and this sometimes has a firm consistence resembling cheese, and when divided shows an even, mottled, yellowish-white surface. At other times, it is converted into a much softer matter, less uniform in texture, and resembling a mixture of yellow cream and curds. These finally become converted into abscess filled with scrophulous matter, which makes its way to the surface, and gives rise to a suppurating tumour. Inflammation now seizes the integuments, and spreads to the surrounding parts: these go on to suppurate, and, together with the newly formed substance, produces a large abscess, by which the gland is totally destroyed. Although this is the common progress of scrophulous inflammation in a lymphatic gland, instances of its pursuing a different course are not unfrequent. Sometimes the gland remains apparently unaffected, while the scrophulous matter is formed around

it so as almost completely to insulate it: and when the abscess is opened, it occasionally comes away entire along with the discharge.

Frequently several glands become simultaneously tumefied, and continue distinct till they have acquired a very great size. At length they coalesce, and form an immense tumour, which compresses the larynx and pharynx, so as to impede respiration and deglutition. These tumours, even when they have obtained this size, may entirely subside without the formation of matter, though he thinks they oftener suppurate in several places, and leave very troublesome ulcers behind. He relates an interesting case in which the cervical glands were enormously enlarged from ear to ear, and which he cured by leeching, and bread and water poultices, in addition to the constitutional treatment already detailed. He observes, that not only the lymphatic glands of the neck are liable to undergo this scrophulous disorganization, but by a similar process abscesses have been formed on the middle of the tibia, behind the inner condyle of the femur, above the same process of the humerus, on the inside of the ulna near the olecranon, above the middle of that bone, above the clavicle, in the thoracic duct, in the thyroid, thymus, parotid, sub-maxillary, and inguinal glands. Scrophulous abscesses, moreover, may originate in every other part of the body independent of the glands; but when this is the case, he says, that suppuration is more rapid in its formation. Instances of this kind are frequently met with in children, particularly on the cheeks and head. We once observed them also on almost every part of the body of a patient who had been long afflicted with a pseudo-syphilitic disorder, and the effects of mercury. They form immediately underneath the skin, and bear a strong resemblance to encysted tumours. When opened, they discharge a serous fluid containing particles of the scrophulous curd-like matter.

Treatment. Mr. Lloyd has given his ideas concerning the

proper treatment so particularly, that we will subjoin his own words.

“As all these diseases depend upon the state of the constitution, the most judicious local treatment will be unavailing, if proper constitutional remedies be not made use of at the same time.

“When the glands have become simply enlarged, and appear in an indolent state, the less that is done to them the better, as nothing but constitutional remedies appear to have much influence upon them in that state. It may, however, be right to bathe the part with salt and water, or any other cooling wash, to prevent the surrounding parts becoming irritated by the pressure made on them by the enlarged gland. In the more advanced stages of the disease, the treatment consists in allaying irritation by soothing applications, and by applying leeches if there is much pain. When several enlarged glands, having remained in an indolent state for some time, suddenly begin to enlarge, are painful to the touch, and seem disposed to coalesce, although the superincumbent skin is neither discoloured nor tense, the application of leeches and cooling washes is often highly serviceable: but when they have coalesced, forming a large tumour, and the skin above is tense and discoloured, the best applications are warm emollient poultices, as they tend to take off tension, and consequently allay irritation. If, under these circumstances, it be judged necessary to apply leeches, on account of the great irritation and pain, they should not be applied to the discoloured skin covering the tumours, but rather at some little distance from it, and then they may be serviceable, though without this precaution they might have increased instead of diminished irritation.

“It often happens that when the swellings have arrived at this height an abscess forms; but it also often happens that they become indolent, and the pain and tension both subside; the tumour, however, remaining undiminished, will, upon examination, be found to contain, on its upper

surface, a small quantity of fluid. In this case the application of a blister, to be kept open for a few days, and repeated according to circumstances, will often promote rapid dispersion of the fluid, and indeed sometimes of the whole tumour. The application of blisters and other stimuli, in glandular swellings, without great discrimination, would, I believe, be attended with much mischief.

“When an abscess has formed, it often becomes a question whether we should open it, or allow it to be opened by ulceration. This is a question, however, which admits of no definite answer, as no positive rule can be laid down. It must be left to the discretion of the surgeon, and a few observations will point out the circumstances which are to govern his decision.”

The following cases illustrate the success of his treatment:

“A young lady, about sixteen years old, of dark hair and eyes, and of very good complexion, had had the glands of the right side of her neck indolently enlarged, for between three and four years. At the time I saw her, which was in November, 1817, they were increasing in size, and two or three of them had coalesced, and formed one large tumour, on the surface of which there was evidently some fluid, although the skin covering it was not at all discoloured. It was very little painful. Her health was very delicate. She was very susceptible of cold; and her bowels were very costive, being relieved only once in two or three days. Her appetite was bad, and she seldom made any other meal than dinner. She had been under several medical men, and consequently had tried various plans of treatment: while under one, she had taken large quantities of muriatic acid in the infusion of roses. When she came under my care, I prescribed for her half a grain of calomel, and five grains of the pilula aloes e myrrha, every night, as her bowels were so constipated; and ordered her to bathe her neck with salt and water three or four times a day. I also directed her to be

particularly attentive to her diet ; to avoid all stimulating food, and to take her meals at regular intervals.

“ When she had pursued the plan of treatment laid down, for about a month, her health was wonderfully amended, her appetite much improved, and her bowels much more easily regulated. Her rest too, which before this was always disturbed, was now tranquil and refreshing.

“ As the swellings, however, were much in the same state, and her health greatly improved, I ordered a more stimulating application to be made to them, viz. a strong solution of muriate of ammonia in vinegar. She continued this application until an eruption was produced all over the surface of the tumour, and then a bread and water poultice was substituted.

“ This plan of treatment was pursued till the following May ; the pill, however, being taken only every other night. At this time the swellings in her neck were scarcely to be felt, and general health was extremely good.

“ The case of a little boy, aged five years, of a fair complexion, hazel eyes, and brown hair, who had scrophulous abscesses on several parts of the body, and immense enlargement of the glands of his neck, tumid belly, pallid countenance, extreme debility and emaciation, and indeed every symptom of being highly scrophulous. He had been in this state for nearly a twelvemonth. His bowels were, at the time he was brought to me, which was in April, 1818, in a very irregular state, being sometimes very confined, at others very much purged ; and the colour of the fæces was alternately very dark and very light. His appetite, however, was generally voracious.

“ One abscess had formed in his neck, which had burst and discharged its contents. Another had formed on the inside of the tibia, about its middle, which I opened, as soon as I clearly ascertained that there was matter, and about an ounce of serous fluid, mixed with a curdy matter and a little pus, was discharged through the opening ; and on examining the bottom of the abscess with a probe, I dis-

covered that the bone was bare. The lymphatic glands of the opposite groin were diseased ; indeed, two of them had suppurated.

“ This case had so progressively got from better to worse, and the mesenteric disease was so evident, that the medical man who had attended it from the first, gave it up as irremediable, and indeed the parents of the child almost despaired of seeing him recover. I am happy, however, to say, that when I saw him last, he was what may be called quite well ; the mesenteric disease had subsided, all the abscesses had healed, although a small piece of bone came away from the tibia ; his whole appearance had altered, and no vestige of the disease remained, except a trifling enlargement of the glands of his neck, and they were gradually subsiding.

“ No specific remedies were made use of in this case ; he was put upon the treatment described in the first part of this Essay, viz. attention to his diet, and to his stomach and bowels, and soothing applications to the local diseases. All the medicines he took were half a grain of calomel, and five grains of rhubarb every other night, with an occasional purge, and these he continued till the end of October.”

Scrophulous ulcers. A great variety of definitions of scrophulous ulcer has been offered ; but according to Mr. Lloyd, the only characteristics that can be depended on are, its occurring after a scrophulous abscess ; the peculiar dull red or purple colour of its edges ; its remaining indolent for a great length of time, neither increasing nor diminishing in size ; and its being attended by that particular state of health which invariably prevails in the scrophulous constitution. His treatment of such ulcers consists in “ attention to the patient’s diet, and to his stomach and bowels, and in soothing applications to the local disease.” When the thickened purple edges of these ulcers overlap the surface and prevent it from healing, he recommends to destroy them by the application of kali purum. Of all the variety of local applications, he knows of none that agree with scrophulous ulcers

better than those which are slightly astringent; and what is called the diluted citron ointment is, in his opinion, the best. When this species of ulceration is situated over a bone, it is particularly apt to produce an exfoliation of the surface, and he therefore recommends to open abscesses in such situations, as soon as they are formed. When a scrophulous ulcer, which is connected with a diseased bone heals, "the scar is always particularly unsightly, as the skin becomes drawn in, and firmly attached to the bone, so as to form a complete pit or hollow."

Mammary Scrophula. In the female breast, this disease presents a different appearance, according to the age of the individual. In young women, it generally commences with the formation of a hard moveable tumour in some part of the organ. In adult age, it is generally distinguished by enlargement of all the glandular structure of the breast which becomes preternaturally firm, while the skin and adipose texture continue soft and incoherent with the condensed parts. The distinct tumour of young women rarely continues stationary, but progressively increases in size, and coalesces with the surrounding parts, which become tender, inflame, suppurate, and break into small ulcerated openings, that are very difficult to heal. Occasionally also, the whole skin of that portion of the breast in which the abscesses are seated, becomes discoloured and diseased, the tumefaction augments, and a considerable degree of constitutional irritation ensues, which is seldom completely relieved by general or local bleeding. Under such circumstances, he advises the insertion of a seton in the vicinity of the affected part, in addition to the appropriate general treatment.

The variety of mammary scrophula which occurs in females of a more advanced age is somewhat different in its progress and termination. It will generally remain indolent "for many months or even years, only gradually and almost imperceptibly enlarging, and unattended with pain or even tenderness on pressure;" till suddenly the

surrounding parts inflame, and become consolidated with the enlarged gland.

“ At this stage the tumour will often become very painful, and a great degree of constitutional disturbance arise. The bowels are generally torpid, the tongue pallid, and of an unhealthy appearance, and the pulse rapid, though often very weak. The breast at length shows some disposition to suppurate; but this is, in general, very partial, only a small abscess forming on some part of its surface, producing in its formation great pain, though perhaps not containing above a tea-spoonful of a curdy whey-like matter, which is generally discharged through a very small aperture. This, however, generally gives a great deal of relief to the patient. A slight discharge will often continue for a few weeks, till the aperture closes; when a new abscess will form, attended by the same symptoms, and pursuing the same course. In this manner abscesses will continue to form successively for several months, until the tumour gradually diminishing, the whole breast wastes away.

“ During the formation of these abscesses, if we trace the surface of the breast with our finger, it often appears nodulated, and particularly at those parts where the superincumbent integuments have not become firmly attached to the subjacent gland; but sometimes it appears as if there are several soft places, or pits, in the surface of the tumour, into which we can readily introduce the top of the finger.

“ During the progress of this disease, it is very common for abscesses to form in the course of the absorbents passing to the axilla, and in the glands of the axilla itself, and even before any abscess has formed in the breast; but these are of no consequence, and always cease with the original disease.

“ I have known instances of this disease continuing for several years, when improperly treated, or when proper constitutional treatment has not been employed, producing great debility, and keeping up horrible derangement of the general health. When, however, a judicious plan of treat-

ment is had recourse to in an early stage of this disease, it will generally subside in a few months, without the formation of matter ; and even when abscesses have formed, we may very much diminish the mischief which would otherwise follow, and conduct it to a more speedy termination.

“ The constitutional treatment consists in attention to diet, and to the state of the bowels ; and when the constitutional disturbance is great, with the pulse that has been described, I have found occasional doses of some neutral salt, with small doses of hyoscyamus, extremely useful. Tonics and stimuli I feel convinced are generally injurious ; and that it is not by such means we must attempt to give strength to our patient, but by regulating the quantity and quality of the food according to the condition and powers of the stomach.

“ In the local treatment, the application of poultices is indispensable ; and I believe the decoctions of hemlock, or poppies, are useful adjuncts. Leeches may be applied according to circumstances ; for, though in the other form of this disease, or when a lump, or distinct lumps form in the substance of the breast, which is otherwise healthy, they seldom do good, in this species of the disease they often afford considerable relief. They must not, however, be applied in such numbers as to weaken the patient.

“ We may sometimes very much expedite the reduction of the tumour, in those cases in which abscesses have formed, by enlarging the aperture through which the matter has been discharged, by the application of the kali purum, so as to form an issue. This, of course, is to be kept open, by occasionally touching the edges with caustic, till the tumour has nearly subsided, or till any sinuses that may have existed have entirely healed. I had a patient, aged thirty-four, who had her right breast in this state for between three and four years, which perfectly recovered in less than nine months. In this case there was great hardness, and there were several sinuses, but all healed after the establishment of the issue.”

Mr. Lloyd has attempted to discriminate between this species of scrophulous mamma and true scirrhus of the same organ. He admits that in the earlier stages it will often prove impossible to distinguish them from each other ; but after they have existed for a long space of time, and acquired much size, he thinks the nature of the disease may be ascertained :—" for if it be true cancer the tumour will ulcerate or very perceptibly increase in size ; and if it be scrophula the tumour will suppurate, or very perceptibly diminish in size."

He states his belief of great mistakes being committed by surgeons who are not acquainted with these circumstances ; and declares that he has seen the organ "amputated for this disease on the supposition that it was cancer."

Notwithstanding the fears, which are so often expressed, of performing operations unnecessarily, we cannot in this instance reject the opinion that it will prove best to resort to the knife in all doubtful cases. It certainly is not always the most safe or humane practice to leave diseased parts to be removed by the tedious and uncertain processes of ulceration and sloughing which the natural powers are only capable of exercising. Death often supervenes before relief can by such means be obtained ; and the pain is more intense as well as more protracted than our patients usually experience from the most formidable operations.

Scrophulous testicle. Children, as well as adults, are occasionally affected with scrophula in the testes. Mr. Lloyd had a case in a child three years old, in which a scrophulous abscess burst through the scrotum and was followed by a wasting of the testicle. In the adult, when these organs are first attacked with scrophula, they gradually become enlarged, and are generally softer than natural. They preserve their natural figure as they enlarge, and seldom attain any very great size. They are not usually attended with much pain, or even tenderness on pressure. This enlargement of the testes progresses very similar to the same affection in an absorbent gland, and ultimately presents the

same appearances in dissection. The morbid substance which constitutes this enlargement is of two kinds. In the first, it is a parenchymatous matter contained in a cyst, and arises from interstitial deposition, or simple expansion of the glandular structure. In this state a small abscess forms in the centre of the mass, and may exist for an indefinite time without producing any apparent alteration in the membranes, or surface of the organ.

In the second species the natural structure of the gland becomes entirely absorbed, and a cheesy, yellowish-white, or greenish-yellow substance, resembling what is found in the cancelli of scrophulous bones, is deposited in its place. The coats of the testicle, however, as in the other species, continue for some time unaltered. This new matter is sometimes made up of several distinct masses, and each mass appears to be surrounded by a cyst.

“ In neither of these forms of the disease, so long as the coats of the testicle remain in their natural state, is the pain very severe; in the latter, however, the pain is greatest. When, however, the coats of the testicle, the scrotum, and other parts inflame, and suppuration commences, the pain is sometimes very great, as in a similar state of the breasts. In both forms of the disease, when inflammation takes place, the testicle and scrotum become consolidated, or they constitute, as it were, one substance. When the enlargement is of the former species it now feels hard, and is not very tender to the touch: in the latter species it is softer and more tender. In this latter species too, at this stage, the small abscesses will be making their way to the surface; and if we trace the surface of the testes with our finger, we find soft places, or pits, with hardened edges, into which we can introduce the point of the finger. When this is the case, it often happens that one or more of the abscesses will soon discharge themselves externally, and if we introduce a probe at the opening, it will readily pass into the substance of the gland. It sometimes, however, happens, that the matter will be absorbed, and the enlarged testicle be gradually re-

duced to its natural size, or keep dwindling away till the whole gland is absorbed. These cases are not very uncommon; and sometimes both of the testicles will gradually disappear as the scrophulous disease subsides.

"It sometimes too occurs, that the enlargement of the testicle having existed for some time, a superficial abscess forms, as in the lymphatic glands; and that after this the testes gradually subsides to its natural size, as if no abscess had formed. Sometimes, however, several sinuses are formed, which continue to discharge a scrophulous matter, and are very difficult to heal.

"When the disease is of the first species, or when the enlargement is produced by the conversion of the testes into a mass of scrophulous matter, abscesses form between it and the surface of the scrotum, and discharge themselves by several small openings, which coalesce and form one large ulcer, through which the newly formed matter gradually comes away, sometimes in one large mass, though oftener in several smaller portions, like sloughs. When, however, only part of the testes is converted into this matter, the separation of it from the remainder of the gland is often very tedious, and it will sometimes project like a large slough through the wound for months without coming away. I knew a case of this kind, in which, the nature of the disease not being understood, castration was performed. When, however, the matter has come away, the wound generally heals readily, as in the case of the child I have related."

Treatment. The first stage requires suspension of the testicle in a bag truss, and the application of bread poultices, or cooling washes. Leeching is useful in the second stage, and rest in the horizontal posture. When there is an increase of pain, and disturbance of the general health, attended by a weak hurried pulse, sedatives, combined with mild purgatives, produce the most beneficial effects. Our attention should, however, be most particularly directed to procure a restoration of the general health. When in the last stage of the disease, the testicle has become nearly or

altogether destroyed, and unhealthy sinuses remain, the sinuous orifices should be enlarged, and the morbid parts destroyed by successive applications of caustic potash.

The following case will impress the leading circumstances upon the minds of our readers.

“ It is the case of a young man, aged twenty-three, who was a patient in St. Bartholomew’s Hospital. The disease was in his left testicle, which was about three times its natural size. It had been gradually enlarging for three months before his admission into the hospital, but during this time there was but little pain in it; when, however, he came into the hospital, it was more painful and tender to the touch, and he complained of pain in his loins. He was very much out of health, and had a weak and rapid pulse. The scrotum now became inflamed, and attached to the outer surface of the gland; and matter formed at this point. At this period leeches, poultices, and fomentations, were had recourse to, but without producing any benefit; and as the tension and pain were great, a puncture was made at the most prominent point of swelling, and a desert spoonful of a sero-purulent matter discharged. This afforded some relief; but as the enlargement did not subside, as there was still pain, and the wound continued discharging, a seton was inserted at the upper part of the scrotum. This, however, not only did no good, but produced great swelling and inflammation of the whole scrotum, so that it was obliged to be taken out, after it had been in for about a month. All the various means that have been recommended for the discussion of enlargements of the testicles, were now tried without any good effect; and as the health of the patient was getting worse, he left the hospital and went into the country. A few months after this, he called on me with his health much improved; and the testicle was almost of its natural size, entirely free from pain; and the wound perfectly healed. The only remedies he made use of were, bread and water poultices, and medicines to keep his bowels regular. Not long after this, however, the gland again swelled, but soon

subsided, by the use of the same means; and since that he has remained well, a space of nearly three years. I saw him lately in good health; and he now gains his living by driving a hackney coach.

"In this case bougies were introduced; but there was no particular affection of the urethra. Mercurial frictions were also used, but with evident mischief to the general health, and with no benefit to the disease." M.

ANALECTA.

Disease of the liver determined by a wound of the scalp.

THE following remarkable example of the power of external injury to excite violent disorder of the hepatic system, is extracted from a late work "On the medicinal powers of chlorine, by W. Wallace, Surgeon to the Dublin Infirmary for diseases of the skin."

"A man, who had been for many years subject to a violent oppressive pain in the upper part of his forehead, so circumscribed, that it could be covered by the end of a finger, received a wound exactly in the situation of the part which was the seat of pain. The wound was not more than three-fourths of an inch in length. The periosteum was divided, but the bone was not injured. The wound was a simple incision, unattended by any contusion, and inflicted in such a manner that there could not have been the slightest concussion. Immediately after the receipt of the wound, the pain, which had for years almost incessantly harassed him, suddenly disappeared. He therefore considered the occurrence of the wound a most fortunate event; and, at his desire, it was dressed in such a way as to prevent its lips being brought together. In the course of two days, the system began to sympathize very remarkably. A sensation of horripilation and great sensibility of the surface of every part of the body set in. In twenty-four hours after this, the scalp and face were attacked by an œdematous swelling; but the skin was not, at first, in any way red. On the contrary, it was rather pallid; but the scalp became so extremely sensible, that not the least pressure could be borne. About this time, that is, three days after the wound of the head, the entire surface appeared perfectly jaundiced; indeed as yellow as I have ever seen it in any case of pure icterus. Matter formed in various parts over the scalp, and in the eyelids. The discharge from his bowels became whitish, not having the slightest appearance of bile; but his urine assumed so much the aspect of this fluid, that it seemed more like the contents of the gall-bladder than any thing else. It was, nevertheless, sufficiently copious. A low muttering delirium now commenced, which soon became violent, and was particularly marked by an unrestrainable propensity to tear the hair from his head, to pull with his nails at his lips, to beat his sides with his arms, and to gnash with his teeth. Whenever he sunk into a slumber, there was an almost continued grinding of his jaws, resembling that which so often occurs in children, from the disordered state of the alimentary canal and its appendages.

He died (very much like a person in typhus) on the tenth day after the receipt of the wound, and seven days from the commencement of the symptoms of jaundice. On dissection, the liver and kidneys were the only parts observed to be morbidly affected. The structure of the former was perfectly natural; but there had been a complete suppression of the secretion of bile. The gall-bladder was full of a mucous fluid, much resembling the white of an egg, transparent, colourless, and entirely void of any bitter taste. The kidneys were greatly enlarged. This enlargement appeared, however, to be the result of recent sanguineous congestion. Their pelvis contained the same kind of fluid which had been evacuated as urine. It was, however, in a more concentrated state, and of an extremely bitter taste. The contents of the cranium were in no way diseased. Whether the cessation of the secretory powers of the liver was, in the preceding case, the immediate cause of death, I shall not take upon me to determine. It must, however, be considered as a very remarkable example of the power of external injury to cause very serious functional disorder of the biliary organ."

Medicinal effects of Elm bark.

Mr. Henry Jeffreys, surgeon of St. George's and St. James's Dispensary, has published some observations illustrative of the good effects of elm bark as a substitute for sarsaparilla.*

The good effects of elm bark in cutaneous diseases have been extolled by several writers, particularly the late Dr. Lettsom, and Dr. Daniel Lysons, of the Gloucester Infirmary. Mr. Jeffreys has given it an extensive trial at the dispensary, and speaks highly of its virtues. The following is the formula.

"DECOCTUM ULMI COMPOSITUM.

"*R.* Decocti Ulmi (P. L.) ferventis oc. viij ;

Sassafras Radicis Concisæ,

Guaiaçi Ligni Rasi, sing. $\mathfrak{z}\text{j}$;

Mezer. Rad. Corticis $\mathfrak{z}\text{iiij}$;

Glycyrrhizæ Rad. Contusæ $\mathfrak{z}\text{j}$.

Decoque per horam, sepone, et cola.

"This decoction, when properly prepared, and strained off, is of a clear brown colour, not unpleasant in its taste, and contains a considerable proportion of amylaceous and mucilaginous matter. Administered in the quantity of a pint a day, it appears to increase the insensible perspiration, to restore the appetite, improve the tone and powers of the digestive organs, to strengthen and invigorate the general system, and to cheer and compose the animal spirits. Like the decoctions of the woods in general, its action may be said to be alterative and tonic; and its use may be persisted in for a considerable length of time, without overloading and oppressing the stomach, or producing any other unpleasant symptom. Its action upon the bowels has, in general, a tendency to produce constipation rather than otherwise."

Our author has administered this decoction, both alone and in conjunction with other medicines, as antimonials, liquor potassæ, liquor arsenicalis, oxy-muriate of mercury, the mineral acids, &c. in a considerable number of cases. The complaints in which he has found it most serviceable, were those which very frequently follow venereal ulcers on the genitals, when mercury has been improperly or inefficiently exhibited—as nodes, and painful tumefactions of the periosteum and ligaments, ozæna, cutaneous defædations, foul and untractable ulcers, scrophulous abscesses, chronic rheumatism, morbid enlargements and induration of the testicles, &c.—*Med. Chir. Review, Dec. 1822.*

* Cases in Surgery, &c. by Henry Jeffreys, Esq. Lond. 1820.

Singular disease.

The workmen of a cotton manufactory at Argues, near Dieppe, were attacked in the beginning of February last with nausea, vertigo and convulsions, which so much affected their imaginations, that they thought they saw spectres and other fantastic objects flying at them and seizing them by the throat. The Doctor not being able in time to calm their troubled brains, the villagers and country people did not fail to declare according to custom that it was owing to a spell that had been cast upon them at the manufactory. A thousand ridiculous ceremonies were performed to make them believe that the spell was taken off, in order to calm the imaginations of the affected. But this remedy served to confirm an extravagant prejudice, and produced only a temporary effect. It became necessary to have recourse to threats, and the fear of being dismissed and thereby losing their means of subsistence, tended at length to restore them to reason.

A memoir on the causes of this malady has been presented to the medical society of Dieppe by M. Nicolle, an apothecary of that town, which contains a very exact and curious recital of the distinguishing traits of these spasmodic affections. The author attributes them to the gaseous oxide of carbon, resulting from the decomposition of the oil by the heat of a cast iron stove on which they were in the habit of placing their vessels of that fluid. This gaseous product as it is well known, is lighter than the atmosphere, and in this way the author accounts for the fact, that it was in the upper stories of the manufactory that the people were first affected, while those on the ground floor were generally preserved from it.—*Amer. Jour. Science*, Jan. 1823.

*Cancer of the Lip.**

M. RICHERAND proposes (founded on experience) a new mode of extirpating cancers of the lips. It is needless to observe that the common method is to cut out a triangular piece of lip including the disease, and endeavour to unite the cut edges by means of pins or sutures. There is often considerable pain in the process of keeping the divided parts in contact, especially where a large portion of lip has been removed, and after all we cannot avoid deformity in many instances. M. Richerand now removes the carcinomatous portion of lip with scissors curved on their *flat* sides, and rather short in their blades. The operation is very quickly performed in this way; but it is in the after-management that the novelty or improvement lies. Instead of bringing the parts in contact by pins or sutures, the bleeding vessels are tied, and a piece of agaric is laid on the raw surface, over which lint and a bandage are placed. On removing the dressings the third or fourth day, suppuration will be found established in the wound; and from this time the mucous membrane of the mouth and the external skin of the lip daily approximate till, in ten or twelve days, they are united in a line, with scarcely any deformity—especially if care has been taken to cut out the piece in the form of a long crescent. M. Richerand called in, to witness the success of this operation, Drs. Beclard, Ribes, Breschet, and J. Cloquet, at the St. Louis Hospital. The patient was a female, and it was necessary to remove the whole of the under lip (*j'avais enlevé la totalité de la lèvre inférieure*) from one angle of the mouth to the other. Yet in this case the removal was scarcely perceptible in a fortnight. When the parts were first removed the aspect of the patient was hideous, and a person who had not known how far Nature could operate in the reproduction of lip, would have said that the patient would never afterwards be able to retain the saliva. In this case the lip was incised below the level of the floating portion—that is, below the angle which the mucous membrane makes

* Nouveau Procédé pour l'Extirpation des Cancers aux Levres. Par M. Richerand. *Annuaire Med. Chir.*

in turning from the lip to go up on the gums. At every dressing the lip was seen more elevated, till at length it not only covered the gums, but rose above the level of the teeth. The patient perfectly recovered, and no deformity was the consequence.

We could not suppose that M. Richerand would deceive us, but when such men as Beclard and Breschet are witnesses of the fact, no rational doubt can be entertained.—*Medico-Chirurgical Review*, Sept. 1822.

Size and Shape of the Globules of Blood in Different Animals.

A number of very interesting results have recently been obtained by J. L. PREVOST, M. D. and J. A. DUMAS, respecting the form of the globules of blood of different animals, and the effects of transfusing the blood of one animal into another. The following are their measures of the diameters of the globules:

| | | |
|--|---|------------------------------|
| Man, Dog, Rabbit, Pig, Hedgehog, Guinea Pig, | } | 1-3750th of an English inch. |
| Muscarden | | |
| Ass | | 1-4175th |
| Cat, Grey Mouse, White Mouse | | 1-4275th |
| Sheep, Horse, Mule, Ox | | 1-5000th |
| Chamois, Stag | | 1-5450th |
| She-Goat | | 1-7200th |

But, while the globules of blood in different animals vary in size, they vary also in form. In the mammalia they are all spherical, while in birds they are elliptical, and vary only in the lengths of their greater axes. They are likewise elliptical in all cold-blooded animals. They found, also, that the colourless globule which exists in the centre of the particles of blood, has the constant diameter of $\frac{1}{7500}$ th of an inch in all animals, and whatever be the form of the globule which contains it.

In their experiments on the transfusion of blood, they obtained many interesting results. When animals were bled till they fainted, they died when they were left alone, or when water or serum of blood, at the temperature of 100 Fahr. was injected into their veins. If, on the contrary, the blood of an animal of the same species was injected, every portion of the blood thrown in reanimated the exhausted animal; and, when it had received as much as it lost, it began to breathe freely, to take food, and was finally restored to perfect health. When the injected blood was from an animal of a different species, but whose globules had the same form, though a different size, the animal was only partially relieved, and could seldom be kept alive for more than six days, the animal heat diminishing with remarkable rapidity. When the blood of an animal with spherical globules is injected into a bird, it usually dies under the most violent nervous affections, as if under the influence of the most intense poison; and this takes place even when only a small quantity of blood has been lost. In a great number of cases, cats, and rabbits were restored for some days by the injection of the blood of cows and sheep, even when the injection of the blood was not made till twelve or even twenty-four hours after the blood was extracted from the latter. The blood was kept in a fluid state in a cool place, either by taking away a certain quantity of fibrine, or adding 1000th part of caustic soda. When the blood of the sheep was injected into ducks, they died after rapid and strong convulsions.—*Bibl. Univers.*

Cold affusion in the treatment of Poisoning from Opium.

The following interesting cases illustrating the efficacy of cold affusion in the treatment of poisoning from opium, are reported by S. WRAY, Esqr.*

* London Medical Repository for July, 1822.

CASE 1.—I was called, early in January 1821, to Mrs. E—, who had, half an hour before, taken about two ounces of laudanum. I found her in bed, in a state of profound stupor. Her pulse was much quicker than natural; her pupils were dilated. Every means which could be suggested at the time were employed to rouse her from her lethargy, but without effect. Under such circumstances, no internal remedies could be administered. I afterwards had recourse to cold affusion, which produced the most decided benefit. A large bucketful of cold spring water was brought into the room, and a quart basinful was forcibly thrown on the head and chest. It roused her on the first application, but immediately afterwards she relapsed into the same state of stupor. By resorting repeatedly to the same means, in about ten minutes I had the satisfaction of hearing her speak. An emetic was then administered, which operated freely. Vinegar and water were given afterwards, and on the least tendency to drowsiness the cold affusion was repeated. I had the gratification, the following day, of seeing this lady perfectly restored.

CASE 2.—April 17, 1821. A gentleman, residing in the vicinity of Chancery-lane, took two ounces and a half of laudanum, in a fit of desperation, on account of some losses he had sustained. Immediately after taking it he became sensible of his folly, and informed the waiter of the coffee-house, where he was at the time, of the circumstance, who immediately sent for a medical gentleman. An emetic was instantly administered, and, after its slight operation, he was put into a hackney-coach, and driven to Fleet-street, where he had given his address. The coachman, on opening the door, found him lying at the bottom of the coach, in a state of perfect stupor, from which he could not be roused. He was taken in this state to the watch-house, where he was recognized, and thence conveyed to his own house; when another medical man and myself were sent for. That gentleman, having arrived some time before me, had employed the usual means in order to rouse him from the state of coma into which he had sunk. Every attempt produced merely a momentary effect; when left alone, he dropt into his former condition. As soon as I arrived, I requested that the cold affusion to the head and chest might be tried. A few applications of it, in a similar manner as in the former case, had the effect of removing completely the profound stupor, and the other alarming symptoms which were present. He complained, the following day, of headach and soreness in the epigastric region: the former arising, most probably, from the effects of the opium on the nervous system; the latter from the irritation induced by the strong emetics administered in order to produce full vomiting. These symptoms soon yielded to bleeding and other antiphlogistic means.

CASE 3.—On the night of May 12, 1822, I was called to Mrs. W—, Whitefriars, an extremely delicate young woman, about twenty-five years of age, who, at half-past ten, had taken two ounces of laudanum, with the intention of destroying herself. Having been at that time particularly engaged, I sent my assistant, with directions to employ the cold affusion, and to administer an emetic as soon as deglutition might be accomplished. If the symptoms were very alarming, he was also instructed to send for me. Immediately after his arrival, I was again sent for, at his request. On entering the room, he acquainted me that he had considered it too late to do any thing, and therefore had not attempted it. She appeared, in fact, when I arrived, nearly dead. During the preparation for the cold affusion, I endeavoured to rouse her by various external means of irritation, but with no effect. The pupils were dilated, and quite insensible to the light from a candle that was presented close to them. The pulse could occasionally be felt in slight undulations, and the body possessed a considerable degree of warmth. The head and chest were raised, and I began by throwing a large basinful of cold water forcibly on the head, which produced an evident twitching in the muscles of the face. By repeating these means, at intervals of some seconds only, she uttered a lamentable scream, much resembling that of a person recovering from suspended

animation by immersion. After a few more applications of the affusion, a very strong emetic was administered, with considerable difficulty; but it was no sooner taken than she relapsed into the same state of inanimation, from which she was only restored by the frequent and forcible dashing of the cold water on the head and chest. She was afterwards raised from the bed, and carried up and down the room between two persons, with nothing on but a chemise; and, by the repeated employment of the affusion, she might be said to have been in a continued shower-bath. In about half an hour from the exhibition of the emetic, it began to operate slightly. The ejected matters smelt strongly of laudanum. The vomiting was promoted by warm water and an additional emetic. After the stomach had been emptied, vinegar and water were freely administered. Notwithstanding these means had been used, she frequently relapsed into a state of syncope, from which she could only be roused by a fresh affusion. In about three hours from the commencement of the treatment, the pulse acquired greater force, and her appearance altogether showed an evident return of the powers of life. By constant attention, during six hours, to the means already employed, whenever they appeared requisite, I had the satisfaction to see her sufficiently restored to allow her, with perfect safety, a few hours of repose. She only suffered a little from debility, during two or three days.

Remarks.—The first time my attention was drawn to the use of the cold affusion in states of the system analogous to that which results from the immoderate ingestion of opium, was shortly before the occurrence of the case first related, when called to a patient in furious delirium, brought on by gin-drinking; and, as there was no possibility of taking away blood or administering internal remedies, I had recourse to the cold affusion, from a full conviction that the derangement was caused by a greater determination of arterial blood to the head, than could at once be carried to the veins, or returned by the lateral sinuses. Believing, also, that a continuance of this state will produce a distention of the capillary vessels in the brain, almost incompatible with life, owing to their delicate texture, and to the softness of the substance of the brain itself, I conceived the best plan to be employed was that which tends to prevent or overcome that distention.

From the well-known power that cold possesses of diminishing arterial action, and of producing constriction of vessels, I was led to its use in that case; and the effects which immediately followed its adoption exceeded my expectations.

The successful employment of the cold affusion in this case of extreme intoxication from a spirituous liquor, suggested its use in the treatment of poisoning from opium. The analogy between the one and the other I considered to be very close; the difference, in my opinion, consisting chiefly in the greater diffusibility of the latter agent, which would give rise to a more alarming degree of congestion of blood in the vessels of the head, after its primary effects had disappeared, than usually follows the ingurgitation of the former agent. The peculiar operation of opium upon the nervous system may also tend to produce a very different effect to that arising from the diffusible stimulants, when taken in an inordinate dose. This specific influence of opium, as well as its more common operation, I consider to be altogether destroyed by the shock made upon the system by the cold affusion; and the extreme vessels become, in consequence of its constringing effects, roused to a healthy and tonic state of action. The event of the three foregoing cases sufficiently proves the efficacy of the cold affusion, in removing the noxious effects of this powerful agent. I have contented myself with giving an outline of their more prominent features. They are the only cases which have come under my observation since the mode of practice was suggested to my mind, in the manner I have mentioned; and although they are few, still they are most important, from their uniformly successful issue. The last case more especially evinced the surprising effect of this remedial agent; for, to a

superficial inspection, dissolution had apparently taken place, before any means of restoration were employed.

Elutriated oxyd of Tin in Epilepsy

Dr. SHEARMAN, in a paper on Epilepsy,* says, "The medicine which, in my hands has more frequently succeeded than any other in removing epilepsy, is the elutriated oxyd of tin, given in the dose of from 2 scruples to 1 drachm to an adult, night and morning, for about four days, at the end of that time giving a purgative, and again resuming the medicine or not, according to its effects upon the system, or its apparent power over the disease. That it possesses powers different from, and superior to the other preparations of the same metal, I am fully convinced, and I think it deserves a trial by practitioners after they have been disappointed of success in the exhibition of other remedies."

Remarks on Inflammation in the Chest. By J. MORLEY, Esq. Surgeon.

As peripneumonia frequently takes place at this season of the year, and a great number of cases having fallen to my lot during my residence at Wellington, in the county of Lincoln, I have at length discovered a characteristic symptom, which will enable practitioners in medicine to discover when the inflammatory stage has ceased, and the purulent commenced. The discovery I consider of the greatest importance, because it will stay (or at least moderate) the further necessity of bleeding, the remedy at present principally depended upon in the inflammatory stage, and, if continued when an abscess has formed, frequently proves fatal. It will also enable the medical attendant to give peremptory orders for the patient to be kept in bed, with the chest well elevated; for, if this is neglected, immediate death sometimes takes place from suffocation.

The change from the inflammatory to the purulent stage may be ascertained to a certainty by the following test:—Place a hand upon each side of the chest, at the same time order the patient to articulate: if the inflammatory stage is still going on, a peculiar jar or vibration will be felt by the hands; if an abscess has formed, no such sensation will be experienced. If only one side is affected, the motion will be lost on that side, and distinctly felt on the other. In empyema, the vibration is lost also. The peculiar sensation to which I allude may be distinctly perceived by any person in health placing a hand on each side of the chest, at the same time coughing or speaking. In the female it is not so distinct as in the male, though very perceptible in both.

Lond. Med. and Phys. Jour. Dec. 1822.

On the Purification of Opium by Ether.

M. ROBIQUET, in a late Number of the *Journal de Pharmacie*, has recommended the following method of purifying opium, first recommended by Dr. Alphonse Leroy, and mentioned in an inaugural dissertation upon cholera morbus, which was defended, in 1812, before the Faculty of Medicine, by Dr. Giraud, of Fontenay:—"Very pure opium, perfectly freed from all resinous matter, may be prepared by pouring upon it highly rectified sulphuric ether: the ether takes up all the resin of the opium, and a pure gum opium remains." This he has found to stay upon the stomach when the tinctura opii has been rejected. The narcotine is not taken up by the ether.—*Journal de Pharmacie, &c. Septembre, 1822.*

New Antidote against the Effects of Corrosive Sublimate.

M. Joachim Taddei has lately published an essay, in which he recommends

* London Medical Repository for September 1822.

the use of *gluten* as an antidote for the corrosive sublimate, which he says decomposes the salt in the stomach much more speedily than *albumen*.—*Journal General de Medecine, Juillet, 1822.*

Use of large doses of Tartar Emetic in pneumonia, hydrocephalus, &c. &c.

In addition to the Italian physicians, M. PESCHIER, of Geneva, has recently stepped forward as an advocate for the treatment of inflammation of the chest with antimony, to the exclusion of blood-letting; and his statements are more decidedly in its favour than those of any other writer. He has used it for five years in the Canton de Vaud, during which time he states pleurisy and peripneumony to have been twice epidemic; and that, while his less fortunate professional brethren lost a considerable proportion of their patients, *he cured all his without any exception.* His plan, when he is consulted in such cases,—whether chronic or recent, slight or severe, with fever or without,—is to administer from six to twelve or fifteen grains in six ounces of water, which is to be given in the course of twenty-four hours, at divided doses; some laxative tisane being taken every hour. The dose of tartar emetic was generally increased three grains a day, till the patient took twelve or fifteen; while, at the same time, any indication which nature seemed to hold out was attended to. Thus, if there was a disposition to sweating, two drachms of nitric, muriatic, or acetic æther, were added; if there was much pain, one or two drachms of tincture of opium; if dysuria and dry skin, a like quantity of nitre. The effects were, that the patients generally vomited after the second and third spoonfuls; then the medicine acted on the bowels, or perhaps produced no sensible effect, but speedily removed the disease. It was, besides, observed that a large dose of tartar emetic produced less vomiting than a small one; and that, when a grain or a grain and a half only were given in the twenty-four hours, it caused distressing fits of retching, without beneficial result. Although vomiting and purging generally followed its exhibition, yet the antimony is stated to have acted equally well in removing the disease where no sensible effect was produced; the cure being generally completed within eight days, and rarely requiring fifteen. It was never deemed necessary to bleed, either generally or locally; but blisters were sometimes applied over the seat of pain.

Dr. ARNAUD, of Moulins, has likewise published a paper, in which he details numerous cases of pleurisy and peripneumony cured by antimony, without bleeding; and M. LAENNEC communicated to the Academie Royale de Médecine, at Paris, some cases of hydrocephalus and inflammations of the chest similarly treated. M. L. thinks the sequelæ of the inflammation more quickly removed by the tartarized antimony than by blood-letting. The mortality is calculated at one only in forty at Naples, where this system is in repute; while at Rome, where the new doctrine is less generally received, it is said to amount to forty-five in the hundred.—*Voyage Medicale en Italie, &c.*

Black Urine.

A singular variety of Urine has been described by Dr. MARCET, in which the fluid, although colourless when voided, became nearly black soon after. Several cases of a similar kind have since been mentioned. In one of these the urine was of so deep a colour, that the brightest object, put into the vessel containing it, could not be perceived; and there was no sediment, although it had stood many hours. The exact relation of this phenomenon with the general health is not sufficiently ascertained, although it does not seem distinctly indicative of disease, Dr. Marcet's first patient, and the one just alluded to, having been quite well. Another example, mentioned by this writer, occurred in a girl subject to daily attacks of a febrile and hysterical nature: in Dr. COPLAND's case, there was "an inactive state of the liver:" and in the one mentioned by Dr. MACLEOD, the patient was affected

with pain across the region of the kidneys, and considerable general debility. The chemical peculiarity of this urine seems to be that it contains neither lithic acid nor urea, but that it owes its black colour to a compound of a peculiar principle with ammonia. According to Dr. PROUT, this new principle seems to be one possessed of acid properties, although, from the small quantity of the specimen which could be had for his experiments, it was impossible to obtain satisfactory evidence of its nature. Should future investigations confirm these conjectures, it is proposed to distinguish this new acid by the name of *melanic*, from its black colour.—*Lond. Med. and Phys. Journal*, Jan. 1823.

Medicinal powers of Oil of turpentine.

Some interesting remarks have been published by Mr. MONEY, on the use of Oil of Turpentine. His observations are selected from clinical notes kept at the Northampton Hospital, from 1811 to 1816, and which comprise the histories of many cases. It was used in a variety of diseases, and proved beneficial in all, *except one*. The results given by Mr. M. are as follow :

“By the small doses, (as half a drachm, and less, taken repeatedly in the day,) obstinate chronic rheumatic pains have been removed.

“By doses of one to two drachms, twice, thrice, or four times a day, cures have been accomplished in adults labouring for two years under epileptic fits.

“In doses of six drachms every other morning, and continued for six weeks, children at the age of twelve years have been roused from a cloudiness of intellect, bordering upon idiotism of the melancholic kind.

“As a vermifuge, it has been given to the extent of one, two, three, and four ounces for a dose, the patient fasting : and its beneficial operation has not been confined to the tape-worm, but all the species of worms have been alike expelled.

“In cases where several anomalous symptoms existed,—such as pain in the region of the stomach, distention of the abdomen, irregular bowels, slight, but irregular paroxysms of fever, wandering pains, pulse full, and disinclination to labour, without any emaciation ;—in these cases, in doses of two, three, or four ounces, taken fasting in the morning, it has produced the speediest and best effects.”

Dr. GIBNEY has also recommended its employment in more liberal doses than practitioners have been accustomed to. “There are few children of three years of age who will not bear from one to three drachms, given at intervals.” He advises it to be given on an empty stomach, as little combined as possible with other remedies, and repeated at intervals of about an hour, for two or three times in succession, or according to circumstances : if its operation be delayed, a dose of castor-oil is recommended. This remedy also continues to have advocates for its exhibition in puerperal fever.—*Ibid*.

Nervous Influence.

One important point, respecting the transmission of the nervous influence, which has lately been ascertained by Dr. Philip, deserves to be noticed. This physiologist states, with reference to the section of the par vagum, “that it is necessary, after the division of the nerves, to displace one of the divided ends, in order wholly to arrest the function of the secreting surface ; the influence of the brain still passing in such a quantity, if this be not done, as to bestow on that surface a considerable degree of the secreting power ; and that even when the divided ends, if not otherwise displaced, are separated to a distance of a quarter of an inch.”—*Lond. Med. Repos.* Jan. 1823.

Palsy of the superior Extremities.

Dr. HEALY, of Dublin, has given a short account of a species of palsy which

he has met with in the superior extremity, and which he conceives to be unconnected with any organic disease of the brain or nervous system. He considers it to arise from pressure on the nerves, occasioned by lying with the head resting on the arm. It was invariably found to yield to electricity, "after the usual remedies for palsy have been tried without effect."—*Ibid.*

On the kind of death produced by the Nux Vomica.

M. Ségalas, private Professor of Physiology and Pathology, makes the following observations in relation to the effects of nux vomica in destroying animal life.

"1st. If we take two Guinea pigs, and produce asphyxia in one, by strangulation, whilst, at the same time, we inject into the bronchiæ of the other two or three grains of the alcoholic extract of nux vomica suspended in a spoonful of water, the poisoned animal is immediately seized with a tetanic rigidity, and seems almost deprived of sensibility and motion, whilst the animal in a state of asphyxia preserves the power of motion and sensibility for several minutes.

"2dly. If, in order to place both animals under similar circumstances, with regard to the fluid introduced into the air passages, we inject into the bronchiæ of that which is affected with asphyxia a quantity of water equal to that which serves as a vehicle for the poison, the difference in the death is little less striking.

"3dly. If, in order to be still more satisfied that the respiration of both animals is placed under perfectly similar circumstances, we begin by decapitating them, and inject into the two tracheæ an equal quantity of poisonous and of pure water, death by poisoning occurs still more speedily than that by asphyxia, and the distance between them is greater or less, according to the precautions which we may have taken in order to prevent or diminish the hæmorrhage produced by the operation.

"4thly. We may, to a certain point, extend, at will, the interval between the two deaths, by establishing artificial respiration in both animals, immediately after having decapitated them, and injecting a strong dose of the poison into the cavity of the abdomen of one of them. The latter, under such circumstances, dies almost instantly, whilst the other survives twenty, thirty, forty minutes, more or less, in proportion to the care which we take in endeavouring to prevent the effusion of blood, and to keep up the natural respiration."

From these experiments, which he repeated several times before his pupils, M. Ségalas concludes, in opposition to M. Magendie, who was of opinion that the nux vomica produced death by its secondary effects upon the respiration, that "strychnine, administered in a strong dose, produces death, not by asphyxia, but by a direct action upon the nervous system, similar to what may be produced by a strong electric shock."—*Journal de Physiologie, par F. MAGENDIE, Octobre, 1822.*

On a new Mode for the Cure of Prolapsus Ani. By M. DUPUYTREN.

M. Dupuytren having frequently had occasion to remark the inefficacy of the plans adopted for the cure of persons labouring under prolapsus ani, hit upon a mode of cure which he considers as one of the most important inventions in surgery of which he has been the author. This simple operation consists merely "in cutting off a greater or less number of the cutaneous and projecting folds of the verge of the anus: the operation contracts the opening, by drawing it together almost in the same manner as occurs in a purse when the strings are drawn tight." The number of folds which M. Dupuytren removes is proportioned to the size of the protruded intestine, and the dilatation of the anus. Ten or twelve patients have been treated by this method, and all have been cured without any unpleasant symptoms of relapse.

Should an artery be opened during the operation, M. Dupuytren immedi-

ately cauterizes it. No dressing is required, attention to cleanliness being commonly sufficient to produce the cicatrization of the wounds, and the complete cure of the patients, in less than twelve or fifteen days.—*Journal Universel des Sciences Medicales*, Octobre, 1822.

On the Use of the Preparations of Gold. By Professor LALLEMAND.

This Physician has recently published an essay on the employment of preparations of gold in medicine. He has obtained very speedy and permanent success from the muriate of gold and soda in several individuals affected with inveterate syphilitic complaints, where mercurials had failed. M. L. prefers the salt of gold to mercury, in all those cases where a first mercurial course has been unsuccessful, and *a fortiori*, after a second and third: he has likewise employed it successfully in recent affections. M. L. recommends it to be rubbed upon the gums, tongue, or inside the cheeks. The dose is, at first, a fifteenth or sixteenth of a grain, which may be gradually increased to a fourteenth, twelfth, &c. to a sixth of a grain. Seven or eight grains are commonly sufficient. During the use of the remedy, no remarkable morbid change occurs in the state of health: the gums are not affected by it, and the external characters of the disease quickly disappear.—*Nouveau Journal de Medecine*, Octobre, 1822; and *Journal Universel*, Aout, 1822.

Cæsarian Section. By M. BORRONE, Surgeon at Salto.

A female, aged thirty-six years, died, at the full period of gestation, of dysentery, with which she had been affected for two months. She was in a complete state of emaciation. M. Borrone having been immediately called, performed the Cæsarian section, and extracted from the body, twelve minutes after death, a small emaciated female child. It was some time before the infant uttered the least cry; but it felt warm, breathed, and the pulsations of the heart were manifest. Thirty-two minutes after extraction, it began to suck. It gradually acquired strength, and about the middle of the year 1822 was tolerably robust.—*Repertorio Medico-Chirurgico di Torino*, No. 2.

Results obtained by the Use of the Iodine in the Clinico-Medical Institute of the Imperial and Royal University of Padua.

After the effects obtained by Dr. Coindet, in the cure of the goitre, by the use of iodine, and communicated by him to the Helvetic Society, which resolved immediately on publishing his memoir, the Clinical Institute under the direction of Professor Brera, put this new remedy to the test, not indeed in the cure of goitre, but to restore sanguineous assimilation, increase vascular action, and act in a particular manner on the uterine system in deficient menstruation. Five persons were subjected to these experiments. The preparation preferred was the alcoholic tincture; sometimes the iodine was united to the black oxide of manganese.

Case 1st. Maria Filippini, aged 18 years, had until within these four months past enjoyed excellent health, since then she has had suppression of the menses, by which she has been subjected to repeated spitting of blood.

Arrived at the clinical ward, and subjected to the use of the iodine,—the spitting disappeared, and she went away, her health tolerably well re-established.

Case 2d. Antonia Masa, 21 years of age, likewise wanting in her menstrual discharges for some time past: was taken with vicarious hæmoptysis. The colour of the patient was yellowish, and showed that she also was affected with diseased enlargement of the liver, the result of vascular energy.

The continued use of the iodine restored the functions of the uterus in such a manner that twice the menses flowed for six days in succession.—She is now perfectly restored to health.

Case 3d. Catherine Phillini, 22 years of age, suffering under dysentery from suppressed menstruation, was cured by the continued use of the iodine.

Case 4th. Giovanna Guerinæ, aged 16 years, pellagrous, entered the Clinical Institute with diarrhœa, reduced strength, suppression of the menses, and so emaciated that she seemed already labouring under marasmus.—The tincture of iodine restored this patient to her primitive health.

Case 5th. Maria Giacomini, 23 years of age, presented herself, complaining of prostration of strength, suppression of the menses, and in place of them a monthly loss of blood from the internal angle of the left eye.—The complexion of the patient was jaundiced, and she showed a state of preternatural assimilation in the greater number of the organic tissues, by a defect of vascular action.—When put under the use of chalybeate remedies, she almost constantly vomited.—The iodine alone was discovered to be eminently advantageous. With happy results she was then treated with the tincture of iodine, and subsequently, the same combined with the black oxide of manganese.—The palpebral hemorrhage ceased, and true menstruation appeared in its place.—The patient gained strength and colour, but the want of iodine prevented us from continuing our observations.

It is worthy of remark, that this remedy, besides its being endowed with the property of increasing vascular action, restoring sanguification and re-establishing the ordinary sanguineous excretions, particularly from the uterine vascular system on which it would seem to exercise a direct action, excites the activity of the gastric functions, so that under its use the appetite is renewed and active, the work of digestion goes on with celerity and without inconvenience even in delicate females, and those with weak stomachs.—*Lond. Med. and Phys. Jour. No. 280.*

On the Functions of certain Nerves.

MR. HERBERT MAYO, Surgeon and Lecturer of Anatomy in London, has recently published a small volume consisting of distinct essays on different subjects. The most interesting part of the volume is devoted to a question which is likely to prove of great interest,—viz. the functions of certain nerves, in reference to the doctrines of Mr. BELL and Mr. SHAW. We do not mean at present to enter into any formal discussion of the subject, but to give the evidence on either side, as it may from time to time appear, and have now to lay before our readers some experiments and observations by Mr. Mayo, intended to invalidate the opinions of Mr. Bell.

Experiment 1.—The infraorbital and inferior maxillary branches of the fifth were divided on either side, where they emerge from their respective canals: the lips did not lose their tone, or customary apposition to each other and to the teeth; but their sensibility seemed destroyed. When oats were offered it, the animal pressed its lips against the vessel which contained the food, and finally raised the latter with its tongue and teeth. On pinching with the forceps the extremities nearest the lips of the divided nerves, no movement whatever of the lips ensued. On pinching the opposite extremities of the nerves, I observed that the animal struggled violently, as at the moment of dividing the nerves: these latter results uniformly attend the division of the nerves above mentioned, and of that branch of the fifth which joins the portio dura. Some days afterwards, though the animal did not raise its food with its lips, the latter seemed to be moved during mastication by their own muscles.

Experiment 2.—The common trunk, composed of the portio dura and a branch of the third division of the fifth, was divided upon the masseter muscle on either side: the lips immediately fell away from the teeth, and hung flaccid, and the nostrils lost all movement. The sensibility of the lips appeared unimpaired; the animal raised its food as in the former instance. When the extremity nearest the lips of either divided nerve was pinched, the muscles of the lips and nostril on that side were convulsed.

"Some days after this, the frontal nerve was divided on one side of the forehead of the same ass; when the neighbouring surface appeared to have lost sensation, but its muscles were not paralyzed.

"*Experiment 3.*—The portio dura was divided on either side immediately before its union with the branch of the fifth pair: the muscles of the lips and nostrils seemed as thoroughly paralyzed as in the preceding experiment.

"*Experiment 4.*—That branch of the fifth which joins the portio dura was divided on either side: at first the under lip appeared to fall away from the teeth, but not to the same degree as in the two former instances; at times the lips were justly closed; and the animal invariably raised with its lips, as readily as before the division of the nerves, the oats which were at intervals offered it. The asses employed in these experiments, with the exception of the first two, were killed as soon as the effect of the operation had been satisfactorily ascertained, in order to determine by dissection whether the division of the nerves had been completely effected: in this instance it was found that, on one side, a fine filament, of the size of a common thread, passed from the branch of the fifth to the portio dura, before the place of the division of the former. No difference had been observed between the action of the muscles on either side of the face.

"*Experiment 5.*—A repetition of the preceding; but on one side a larger filament had been left undivided. In this case the under lip did not hang down; no difference had been noticed between the action of the muscles of either side.

"*Experiment 6.*—A repetition of the preceding, with exactly the same result as in Experiment 5th; and still on one side a filament of the size of a thread had been left, uniting the fifth with the seventh. Upon the same animal, the infraorbital and submaxillary nerves were divided: the upper lip was now observed to hang down a little on each side; but this circumstance seemed fairly attributable to the very extensive division of the muscular fibre on that side. The portio dura was finally divided on one side, where it emerges from the skull: the animal was observed to lose instantly the power of closing the eyelids on that side; to determine which point alone the division of the 7th, near the skull, had been intended."

The inference drawn by Mr. Mayo from these experiments is, that the portio dura in the ass is a "simple nerve of voluntary motion;" while the frontal, infraorbital, and inferior maxillary branches, are "nerves of sensation only, to which that branch of the fifth which joins the portio dura probably contributes;" and that other branches of the third division of the fifth pair are voluntary nerves to some of the neighbouring muscles. The author endeavours to show that the nerves which Mr. Bell calls respiratory do not differ in any important circumstance, as a class, from those with which he contrasts them. His reasoning is as follows.

"1. The par vagum: this nerve has many roots, and has a ganglion near its origin. When the branches of the par vagum which pass to the larynx are divided, the voluntary movements of that organ are destroyed; the part is no longer competent to the formation of sounds, or to assist in the act of deglutition; while, on the other hand, respiration is not impeded. The par vagum is acutely sensible: I exposed its trunk in the neck of an ass, and, on pinching it with the forceps, the animal gave violent indications of pain.

"2. The portio dura of the seventh is proved, by the experiments which I have detailed, to be a common nerve of voluntary motion: if it be divided, the muscles which receive branches from it are completely paralyzed.

"3. The spinal accessory nerve: of this Mr. Bell observes, that 'it controls the muscles of the neck and shoulder in their office as respiratory muscles, when, by lifting the shoulders, they take the load from the chest, and give freedom to the expansion of the thorax. When it is cut across in experiments, the muscles of the shoulder, which were in action as respiratory muscles, cease their co-operation, but remain capable of voluntary actions.'

"In human beings, the only muscles of the neck and shoulder which receive branches from the spinal accessory, are the sterno-cleido-mastoideus and the trapezius.

"4. The phrenic nerve is formed of branches of four or five spinal nerves; it generally receives a fine filament or two, from the ninth pair, the par vagum, and the sympathetic.

"5. The posterior thoracic nerve is formed of branches of the spinal nerves."

The author next proceeds to state objections to the experiments of Mr. Bell, (see Philosophical Transactions, vol. cxi.) In the first of these the portio dura was divided, in an ass, upon one side of the head: "the motion of the nostril of the same side instantly ceased, while the other nostril continued to expand and contract in unison with the motions of the chest." Mr. Mayo objects to this experiment as inconclusive, because the nerve was not divided on both sides, and thinks that, if it had been so, a different result would probably have ensued. Next an ass had the superior maxillary branch of the fifth pair divided: no change took place in the motion of the nostril, "but the side of the lip was observed to hang low, and it was dragged to the other side." The opposite branch of the fifth pair was then divided in the same animal: and it was now found that "the power of elevating and projecting the lip, as in gathering food, was lost." In this abridged account of the experiment, it will be observed that two clauses are marked as quotations: to the former, Mr. Mayo objects that it is contrary to his own observation; to the latter, that it is but a theoretical account of the fact, that the animal did not elevate and project the lip,—a fact which he thinks is proved, by his third experiment, to arise merely from the part having lost its sensibility. Again, Mr. Bell states that, in creatures which do not breathe, the mouth, having but one function to perform, has but one nerve. Mr. Mayo says, that the ass does not appear to breathe through its mouth, yet the portio dura in this animal sends branches to the lips, the division of which, and of which alone, paralyzes the muscles of the lips.

We believe we have laid before our readers the principal evidence and reasoning brought by Mr. Mayo against the Windmill-street doctrine; and, although they evince considerable ingenuity, we do not think them so irrefragable as to warrant the conclusion which he gives in the following terms:

"It remains for the reader to decide, whether Mr. Bell's experiments are satisfactory, and bear out his inferences; whether the latter, coupled with my former observations on the five 'respiratory nerves' of this author, leave his theory tenable; and, perhaps, finally to determine whether there exist in the whole of Mr. Bell's essay, after the deduction of his controvertible statements, more than one correct inference. I here allude to Mr. Bell's experimental confirmation of an opinion which, at the beginning of the eighteenth century, occurred to Dr. Blair, on his minute examination of the proboscis of an elephant,—viz. that the infraorbital nerves are nerves of touch."

The question at issue is one of great interest; and we have only at present to add, that we trust the discussion will be conducted, on either side, with that spirit of moderation and candour which ought to influence members of a liberal profession, emulous in the improvement of science and the pursuit of discovery.—*Lond. Med. and Phys. Jour. Nov. 1822.*

Gastritis with gelatinous disorganization.

Dr. Cruveilhier of Paris, has lately published a very interesting account of a disease, which he calls "*Gastro-Intestinal malady, or Gastritis or Enterites of Infants with gelatinous disorganization.*" The following is

* Médecine Pratique éclairée par l'Anatomie et la Physiologie pathologique. Par I. CRUVEILHIER, M. D. &c. &c. 8vo, pp. 183.

the description of the disorder:—"It is ordinarily caused by premature or incautious weaning. Its principal symptoms are diarrhœa, with frequent green stools, if the disease be in the intestines; or, if it attack the stomach, vomiting of mucous or bilious matter; ardent thirst; very rapid emaciation; excessive prostration of strength; anxious countenance; a light stupor, interrupted by cries and convulsions; slow and irregular pulse, and coldness of the extremities. Its morbid result is a gelatinous disorganization, with or without perforation, of the stomach, (most frequently of its splenic extremity,) or of the small or large intestines; with thickening of their parietes, but without any trace of inflammation, or even alteration of colour.

The question is then asked, whether this disease is of recent origin? to which we should answer, certainly not; for, unless we are mistaken, its symptoms have all been enumerated by others, under the head *Infantile Fefer*, or *Remittent Fever of infants*. At the same time we are ready to admit that it has not been so fully described before, nor its morbid results clearly ascertained. The latter is easily accounted for: in the first place, examinations after death have not long been so frequent as at present; 2dly, examinations may have taken place without discovering the principal organic lesion, which, as M. Cruveilhier remarks, requires minute inspection, the viscera at a first view appearing perfectly healthy: not to mention that the ambiguous nature of the symptoms has often directed the chief attention to the head; 3dly, perforations of the stomach, when discovered, may have been attributed to the species of digestion described by HUNTER, often, no doubt, erroneously; since, perhaps, the only unequivocal instances of such a process have been found in persons dying in a state health.

The attention of our author, however, had been already called to the alteration of structure which he has described, when he had an opportunity of satisfying himself as to the nature of the disorder which leads to it, upon the occasion of its becoming epidemic at Limoges, during the latter end of the year 1819. His cases are described with extreme minuteness: of six of them the dissections are given; eleven others were attended with similar symptoms; seven cases of perforation of the stomach are collected from various authors; and, finally, several cases are added, in which this disorder appeared to exist in adults in a state of complication with other diseases. The theory by which it is attempted to account for the disorganization described above is similar to that before applied to the softening of the cerebral substance. Improper food given to infants is supposed to be the source of irritation, producing an afflux of fluids, followed by dissolution of texture, and finally by perforation of the diseased viscus. From the first state of irritation, and second of disorganization, the symptoms which have been enumerated are deduced and explained.

The only diagnosis which the author deems necessary is between this and cerebral disease. The most important diagnostic symptom is the state of sleepiness which accompanies both disorders. But in hydrocephalus it is most profound, in the other easily broken, and interrupted by cries and convulsions: in the former, in short, it is idiopathic, and merely symptomatic in the intestinal disorder. Another distinction is taken from the respiration, which is unequal, in the cerebral disease, from its commencement.

The treatment of the disorder is divided into four heads. Under that of hunger and thirst, the author professes himself, in this instance, a follower of Asclepiades, and enjoins a most severe restriction of the quantity of liquid as well as of solid food allowed to the patient; 2, he recommends a return to the breast, or at least to a milk diet; 3, he approves of warm baths; and, 4, of opiates, particularly in injections."—*Lond. Med. and Phys. Jour.* Nov. 1822.

Bronchotomy.

In addition to the instances of the successful operation of bronchotomy for the removal of foreign substances from the trachea, referred to in Dr. Jameson's communication published in our last number, the following case, furnishes further evidence of the propriety and safety of the operation in accidents of this kind.

Observations on Bronchotomy for the Removal of Foreign Bodies. By MICHAEL WARD, M. D. Member of the Royal College of Surgeons, and late Surgeon to the Manchester Infirmary, &c.

IN the twelfth volume of the Transactions of the Medico-Chirurgical Society, lately published, we meet with "A case of Bronchotomy, successfully performed for the Removal of a Pebble from the Trachea, by WM. J. HUNT, M. D. Communicated by H. EARLE, Esq.; with Observations by H. EARLE, Esq."

In the course of Mr. Earle's observations, he says, "As a valuable additional fact in support of the practice which was so ably pursued, I felt anxious that the case should not be consigned to oblivion, *more particularly as I am not aware of any analogous case published in this country.*"*

The remark I have just quoted induces me to request a page in your Journal, partly with a view to put Mr. Earle in possession of a valuable and important surgical fact, with which it appears he is unacquainted,† but principally in justice to my friend, Mr. Whitley, of Halton in Cheshire, who merits great praise, not only for the able manner in which he performed the operation, but for the courage and perseverance with which he overcame the prejudices he had to encounter previous to its performance.

As an additional testimony, if any were necessary, of the complete and permanent success of the operation, I may add that I have been lately much gratified by a sight of the cicatrix in the neck of Mr. Whitley's patient, and the damson-stone which was removed from the trachea. The boy is now eleven years old, and in perfect health.—*Lond. Med. and Phys. Jour. Nov. 1822.*

Ligature of the superior thyroid Artery.

In the year 1817 Professor WALTHER published a work on Bronchocele, in which he describes a particular species of this disease under the name of *aneurismal bronchocele*, and for the cure of which, he applied a ligature upon the superior thyroid artery. He has recently again performed this operation with perfect success.

Extirpation of the Uterus.

Dr. CHARLES JOHNSON has recently given an account of two cases of inverted uterus, successfully treated by ligature. In both instances the part which came away was found to be the fundus of the uterus and the fallopian tubes. The number of cases on record in which this operation has been successfully performed, is by no means inconsiderable. A successful case of this kind is reported by Mr. Windsor, in the first vol. of the Medico-Chirurgical Journal. And another one by Dr. Clark of Dublin, (*Edinburgh Med. and Surg. Jour. vol. 2.*).

In the following extract from Voigtels "*Handbuch der pathologischen Anatomie*," reference is made to many similar cases.

"Examples of the extirpation of the uterus, either from ignorance or as a

* *Medico-Chirurgical Transactions*, Vol. xii. Part i. p. 32.

† *London Med. and Phys. Journal*, No. 2. of Vol. xxxix. p. 100.

surgical remedy, are not rare. Many of these terminated unfortunately (a), but many succeeded. Thus Wolf (b), amputated a prolapsed uterus with the happiest consequences. Volkmer (c), relates a similar example. Figuet (d), tells of an ignorant accoucheur, who mistook an inverted uterus for a child's head, and tore it quite away. Faivre (e), put a ligature around a prolapsed uterus, it separated on 27th day, and the woman recovered speedily. Wrisberg (f), relates a case where an ignorant midwife cut away the uterus which she had drawn out, yet the woman recovered. Laumonier (g), describes the successful amputation of an inverted uterus, which was mistaken for a polypus. Hunter (h), cut away an inverted uterus, the patient got well. Several other examples of successful extirpation of the uterus may be read in Schenkus (i), Rousset (k), Moinechen (l), Slevogt (m), Dietrich (n), Zwinger (o), and Cavallini, (p).

Cubebs in Chronic Inflammation of Mucous Surfaces. By J. FOSBROKE, Esq.

The case of inflammation of the mucous coat of the intestinal canal, which was treated with cubebs, and some time afterwards published in the *REPOSITORY*, has been succeeded by others in which this remedy was prescribed with uniform success. These cases presented the various species of derangement, from the common symptoms of functional disorder of the digestive tube to sub-acute or chronic inflammation of the villous tunic, seated more or less in particular portions of it, or extending in a greater or less degree along its whole surface.

In a very obstinate case, occurring in a young woman of a cachectic habit, who had twice been reduced nearly to dissolution by chronic inflammation of the villous coat of the intestines, enlargement of the mesenteric glands, and symptomatic cough, with defective menstruation and dysuria, the cubebs were given, combined with bismuth, and leeches were applied to the abdomen: she recovered perfectly under this treatment.

While at Edinburgh, last winter, a case of chronic inflammation of the œsophagus, attended with dysphagia and increasing stricture, came under my care. It had been for about twelve months treated in vain by bleeding, blisters, &c. by individuals of the first and most deserved eminence. It yielded, in a few weeks, to cubebs, combined with the subcarb. of soda, and to the external application of the tartar emetic ointment.

In inflammation of the mucous coat of the intestines, especially when chronic, and in gonorrhœa, where it fails when given alone, I have always suc-

(a) *Peyer*, Misc. Nat. Cur. Dec. II. A. 1. obs. 84. p. 198. *Bartholini* Hist. anat. rar. Cent. 11 obs. 91. tom. 1. p. 334. *Journal für geburtshelfer* 1737. St.

(b) *Miscell. Nat. Cur. Dec. ii. An. 9. obs. 94. p. 161.*

(c) *Ibid. Dec. 1. An. 6. obs. 73.*

(d) *Journal de Medecine*, tom. 41. Jan'ry, p. 40.

(e) *Ibid. tom. 48. August, p. 195.*

(f) *Comentatio de uteri mox post partum naturalem resectione non lethali* Gotting. 1797.

(g) *Fourcroy Medec. éclairée. Paris 1792. tom. iv.*

(h) *Duncan's Annals of Med.* 1799.

(i) *Lib. 4. obs. 303. sq. p. 711.*

(k) *Hysterotomotica*, Basil, 1688, p. 100.

(l) *Obs. Med. Chirur. cum. Anecot. Lanzoni. Dresd. 1691. obs. 4. p. 17.*

(m) *Diss. de utero, per sarcoma ex corpore extracto post modum resecto*, Senæ 1700.

(n) *Rede von einem wahren Vorfalle und glücklicher Absetzung der Gebärmutter. Regensb. 1745.*

(o) *Neue Sammlung für wund ärzte* St. 3. p. 218.

(p) *De felici in quibusdam animantibus uteri extractione*, Flor. 1768.

ceeded by combining it with Cayenne pepper, or with balsam of copaiba.—*Lond. Med. Repos. Dec. 1822.*

Evolution of Heat by Moistening.

"Some new phenomena connected with Heat have been discovered by M. Pouillet.* Having been struck with the development of electricity, and the relation which subsists between the electric properties of a body and those of its elements, he was induced to examine the compounds of which water forms a part, whether as an essential element in a fixed proportion, or as an accidental expedient in variable quantity. Numerous experiments, made on simple bodies, as oxides, and more compound substances, (as glass, porcelain, and clay,) have led him to the conclusion, that caloric is disengaged at the moment when a solid is moistened by a liquid. This circumstance, if it shall be proved to exist as a general law, is obviously one of extensive application, and calculated to explain many phenomena, the nature of which has hitherto escaped the detection of the most acute philosophers. The act of moistening is one of constant occurrence: the rain which falls on the earth moistens its surface and the subjacent strata; vegetables have a source of heat in the same cause; and in the animal body, where various fluids are in constant circulation, the act of moistening is carried on at every moment, whether these fluids simply pass along the sides of the vessels, or pass through them by exhalation or absorption.

The quantity of caloric disengaged in the act of moistening, as shown by the experiments of M. Pouillet, is small, as indeed might be expected from the fact having hitherto escaped observation. This, however, does not lessen the importance of his discovery: for, in the physical world, the greatest natural causes are not those which act on matter with the greatest violence, but those whose operation is the most universal and the most constant.

The quantity of caloric disengaged being so small, requires extreme sensibility in a thermometer capable of measuring it; and, after trying the calorimeters of Leslie and Count Romford, M. Pouillet invented a mercurial thermometer, so minute in its divisions as to mark the hundredth part of a degree of the centigrade. Furnished with an instrument of this delicacy, he was able to establish that, when a piece of glass was moistened with water, caloric was evolved at the point of contact, which communicated itself from this point to the glass, on the one hand, and to the water, on the other. But, by diminishing the number of the superfluous particles, which were heated at the expense of the others, and augmenting the proportion of surface brought into contact, he was able proportionally to increase the degree of heat. Thus, if, without changing the mass, he gave it a surface an hundred times more extended, it disengaged, when moistened, an hundred times more caloric. It is necessary, in order to render these experiments successful, that the proportion of the mass to the surface be kept in view; because, where the surface is not extended sufficiently, the disengaged heat is taken up by the mass so rapidly as to prevent it from becoming sensible. Thus, if a thick piece of glass be moistened, no effect is perceptible; but, if a very thin plate be used, the thermometer indicates a very sensible increase of heat. Another state in which bodies are capable of indicating these phenomena, is that of fine powder, by which the capillary attraction for the fluid is favoured, and the surface of contact extended. In this manner various metals, oxides, earths, and compound bodies, were used: the liquids were distilled water, oil, alcohol, acetic æther, and volatile oil of turpentine. The same general result presented itself,—viz. increased temperature, varying from one-fifth to one-half a degree of the centigrade thermometer; the elevation being nearly the same from different solids with the same liquid, and the same solid with different liquids."—*Lond. Med. and Phys. Jour. Jan. 1823.*

* *Annales de Chimie et de Physique*, tom. xx.

Some experiments have been made by M. VAUQUELIN on the combination of acetic acid and alcohol with volatile oils.* Various proportions of the above acid and volatile oils were placed together in phials, and shaken, by which their union was effected; and it was found that, when the acetic acid is pure, the oil can absorb it entirely; but, if it contain any water, though not exceeding five per cent., a part will remain, which the oil cannot take up, so that the remaining acid, which does not enter into the combination, contains necessarily a greater proportion of water than vinegar before the process. These experiments agree with the facts already known of vinegar becoming impregnated with the odour of plants.

From similar experiments, it was found that one hundred parts of volatile oil of turpentine, mixed with twenty parts of alcohol, formed a homogeneous fluid, which did not separate on being left to settle. This mixture, or rather solution, is not disturbed by water; but, when poured into water, and gently shaken, a portion of the alcohol detaches itself, and unites with the water, forming distinct streaks.—*Lond. Med. and Phys. Jour.* Jan. 1823.

Cynanche Cellularis.

A disease of the Cellular Membrane of the Throat, which would seem to be of rare occurrence, has been described by Dr. GEORGE GREGORY.† The patient complained of pain and tenderness of the external parts of the throat, extending round the neck, and being particularly felt at the junction of the clavicles with the sternum. She had considerable fever, with much difficulty of swallowing, but no diseased appearance could be perceived on examining the fauces. There was neither hoarseness nor any considerable difficulty of breathing. She was bled and purged, without any effect in arresting the progress of the disease, which, continuing to advance, proved fatal on the seventh day. The cellular membrane surrounding the trachea, pharynx, and palate, was every where in a state of disease: "in some places, actual sphacelus had occurred; in others it was in a state of what might be called imperfect suppuration." The same morbid alteration extended along the anterior mediastinum, as low as the ensiform cartilage. The thoracic and abdominal viscera were sound; and the mucous membrane of the throat, larynx, and pharynx, presented no other unusual appearance, except that they were covered with an abundant secretion of tenacious mucus. This form of disease, to which Dr. Gregory proposes to give the name of *Cynanche cellularis*, is regarded by a respected contemporary as a modification of erysipelas. "The above disease (says he,) appears to us to be an unequivocal specimen of that dangerous species of erysipelas which attacks the cellular membrane under the skin, and between the muscles. In the year 1809, the crew of his Majesty's ship *Royal Oak* suffered severely from this disease, while cruising in the Bay of Biscay. Some lives were lost, and the disease appeared to be contagious, running through a considerable number of the ship's company. It would destroy the whole cellular membrane of a limb in a few days, and, when the integuments were slit open, they would fall completely off the muscles, which were left as clean as if they had been carefully dissected. Nothing but free and early incisions through the integuments, so as to allow of the exit of matter and cellular sloughs, saved the life or limb. In several instances it attacked the trunk of the body, and two or three cases proved fatal. The carpenter, Mr. Dalrymple, died in a state of coma. The fever attending the disease was of a typhoid type, and did not bear depletion."‡—*Ibid.*

* *Annales de Chimie*, Mars 1822.

† *London Med. and Phys. Journal*, October.

‡ *Medico-Chirurgical Review*, December 1822.

LITERARY INTELLIGENCE.

HECKER'S HISTORY OF MEDICINE.

We have received, and perused with much satisfaction, the first volume of a History of Medicine by Dr. J. F. K. HECKER, of Berlin. To present to view the progress of knowledge in our profession, and to give such an analysis of past opinions, as may enable us to compare their various and often erroneous theories and modes of practice, and to learn the path of future improvement from the history of past errors, are the objects professed by the author. The first volume contains the history of medicine from the earliest dates to the time of Galen inclusive; and if we may judge from the first, the whole work may be comprised in five or six volumes. His analysis of the writings of ancient authors, especially of Hippocrates and the older Greek philosophers, are fuller than those of Spurgel, perhaps we may venture to say, a little too prolix; and, we think the work superior to the former in its arrangement, and in the more philosophical and thoroughly elaborated views of the opinions of the schools of antiquity. We regard it as a very valuable accession to medical literature, and hope our country may be soon favoured with the work in the attire of our own language.

BURNS'S MIDWIFERY.

Mr. EDWARD PARKER, of this city, has just published a new edition of Burns' Principles of Midwifery, from the last London edition, with Notes by Dr. JAMES, Professor of Midwifery in the University of Pennsylvania.

The number of editions which this work has already gone through both in Europe and in this country is evidence of the high estimation in which it is held by the profession. The last London edition from which the present one is printed, contains several important articles not included in the former editions. Of these the articles on pneumonia, ephemeral fevers, on weed or intestinal fever, on puerperal diarrhœa, on bronchitis, and on infantile peritonitis, are very valuable. The sections on abortion and uterine hemorrhage, are very considerably extended and improved, and "may now be considered as containing the essence of his separate Treatises on those very interesting subjects." To the present American edition the Editor has made many very useful and interesting additions. He has "introduced into the text a section on the difference between the male and female pelvis;" an account of the cauliflower excrescence of the os uteri, and a general view of Baudelouque's divisions of labour, "together with several species of presentations, which it may be useful to keep in recollection in actual practice."

The present edition of this work is got up in a very handsome and substantial manner, and, as it is certainly superior in every respect to any of the former editions, it will no doubt obtain a general preference.

MONTHLY JOURNAL OF MEDICINE.

A new medical journal has made its appearance at Hartford, (Conn.) under the title of "The Monthly Journal of Medicine, containing selections from European Journals, the transactions of learned Societies, &c. and embracing a concise Analysis of the Medical journals of the United States. Conducted by an association of Physicians." We consider the plan of this Journal as very judicious, and judging from the numbers we have seen, we are satisfied that its management is placed in able hands. We wish it, and all our contemporaries, success. The number of respectable medical journals issued at present in the United States, augurs well for the progress of medical science in this country.

DR. R. BECK, of Albany, is about publishing a comprehensive work on medical jurisprudence. Dr. Beck has for many years paid particular attention to the subjects of forensic medicine. From his talents and learning, we have reason to expect a very interesting and valuable work.

Preparing for the press, a *Materia Medica* of the United States, systematically arranged, by WILLIAM ZOLLIKOFFER, M. D. Second edition.

This work will contain many indigenous plants that were not included in the former edition.

Eloquence.—The following display of eloquence is extracted from a thesis, published some months ago by a medical graduate of our distinguished University. The whole dissertation is a masterpiece of its kind; but the dedication, in which the young author seems to have exerted all his powers, is *singularly* original and splendid, and shows how well he merited the honours of the doctorate. It is dedicated to no less than *seven* professors in the following elevated strain.

GENTLEMEN—Ambitious to achieve the noblest object which can honour and emulate the character of a man, I this day begin the consummation which directs me to the most exalted wished for attainment, or places me at once to the lowest grade of heart-rending animadversions and despondency. It is an epoch in life which will be cherished with pleasure or thought of with sorrow to the latest periods of memory.

The idea of success in such an undertaking is like a dream to a thirsty man who wakes but finds he is still wanting; or it is like the "music of carol," mournful though pleasing to the soul. Its disappointments are more poignant to the mind than the midnight gloom of harpies in a charnel house. As it is insuperably exalted in its acquirement, it is tantamount degrading in its invectives.

From the happy expressions of a modern writer I behold already the seducing flowers whose fascinating beauties "invite me to partake of them without restraint," but the autumn has not arrived when the fruits will hang plentifully to reward the industrious and the meritorious.

When I behold the vast number of heads and pens which have thronged the pages of medical history with the improvements of their art; when I consider too that most of these records have appeared to us from a European origin; I entertain a notion of patriotic pride that the day is not very far distant when the sons of republican Columbia shall be able to subvert their ascendancy, and triumph over the archives of despotic Britain. To this wished for probation which "age and injury has hallowed deep" in the annals of medicine I am at present but a fugitive disciple. The anticipation, however, of such a happy and boasted conjuncture in American science fills me with aspirations characteristic of the insulted genius of my country.

But in thus giving vent to intellect and sensation it is not my wish to excite sympathy in the breast of my preceptors, nor to animate them by my enthusiasm. I must be content for a time to search out the path which has been trodden by a former traveller whose labours have but cleared away the rubbish for my easier access to its destination, or with more probity of confession I am happy to imitate the stream that is "carried through a channel formed by art for its course."

But you, noble examples of industry and of genius, who appear like bright constellations surrounded by terrestrial meteors, imitate the bold river which overflows a whole valley, and where it does not find can force a passage by its own natural impetuosity and strength.

The boundless expanse which is opening before my eyes, and the stream of knowledge which appears to flow not beyond my reach, inspire me with a jealous determination to fulfil the maxim so appropriate in medicine, *nil desperandum*. In attempting it I feel like the little child who with a shell dug a hole in the sand to contain the water of the ocean. Nature, however, has bestowed upon me a medium portion of intellect; fortune has afforded me an opportunity to improve, which many great men never possessed. It is by my own exertions therefore, that I am to attain the transcendent acme of modern improvement. With this principle, which I entertain as a desideratum to future eminence, I proceed to a description of the subject intended for this essay. In doing so I approach it with a jealous uncertainty. If my success be equivalent to my endeavours, I trust I have nothing to fear.

But future attestations must confirm the jeopardy. I engage in it like the infant commonwealth, at the time of the origin of the republic of Holland, which it is said represented a ship struggling amid the waves unassisted by sails or oars, with this motto—*Incertum quo fata ferant*—I know not whither my fate may carry me.

PHILADELPHIA EYE HOSPITAL.

We are requested to state that the distinguished and public spirited Managers of the new "*Philadelphia Hospital for diseases of the Eye and Ear*," have so far organized the institution under the provisions of their charter, as to provide for the gratuitous treatment of patients from any part of the country. We shall publish in our next Number, a very interesting report of the operations which have been performed during the past year, by Dr. M'CLELLAN, the Surgeon of the Institution. Those among our professional brethren in the country who may feel inclined to patronize this establishment, will confer a favour on the Managers, as well as forward the interests of the Science, by directing their poor patients to its charge. Board can be obtained for less than two dollars per week, during the short time which it will be necessary to spend in the City for the purpose of undergoing an operation.

TO THE MEDICAL PROFESSION.

In almost every section of our country, epidemic fevers, peculiar in character, and singularly fatal, have, for the last few years, prevailed to an alarming extent.

Desirous of improving science, and serving the cause of humanity, by directing the attention of physicians to their investigation, the proprietor of the American Medical Recorder is induced to offer a premium of One Hundred Dollars, or a Gold Medal of equal value, with an appropriate inscription, (at the option of the author,) for the best essay on their causes, nature, mode of treatment, &c. &c.

The essays will be submitted to the decision of not less than four respectable physicians; and in order to obviate the chance of partiality, the candidates are requested to forward their essays unsigned, accompanied by a sealed note containing their name and address.

The successful essay will be published in the American Medical Recorder; and as it is desirable that it should appear in the number for January 1824, communications (post paid) to the publisher, will be received until the 15th of November next.

Philadelphia, May 1823.

N. B. Should the plan taken by the publisher of this Journal, be successful in obtaining the desired information, and the cause of humanity benefitted, it is his intention to offer a premium annually, for the best essay on some popular subject connected with the science of medicine.

Gentlemen who send essays, are particularly requested to write them in a very legible hand.

Notices or advertisements, from Medical Colleges or Universities, will be inserted, free of expense, in this Journal.

A charge will be made for advertisements from private Lecturers, Booksellers, Druggists, &c. at the following rates, viz. for one quarter of a page, \$1; half a page, \$2; three-fourths of a page, \$2 75; and a whole page, \$3. The months of publication are, January, April, July, and October. Advertisements to be inserted, must be handed in at least ten days previous to the months of publication.

The publisher of the American Medical Recorder, respectfully informs its numerous patrons, that notwithstanding the various intrigues, and means used to make the work subservient to the particular views and interests of certain gentlemen, disregarding the true principles of medical science, he is happy to say the journal is free and independent, having solely in view the improvement of the healing art, and the cause of humanity. To obtain this desirable object, every necessary and ample arrangements are made.

In noticing the productions of medical gentlemen in general, impartiality and truth will be strictly observed, without respect to persons.

The publisher of the American Medical Recorder will shortly put to press the following works:

MEDICAL JURISPRUDENCE,

Comprehending Medical, Chemical, Anatomical, and Surgical Investigations, applicable to forensic practice; for the instruction and guidance of

Coroners, Magistrates, Barristers, and Medical Witnesses. With a copious Appendix of Statutes, Cases, and Decisions. Three volumes octavo. By John Ayrton Paris, M.D. F.R.S. Fellow of the Royal College of Physicians, Author of the Pharmacologia, &c. &c. &c. and John S. M. Fonblanque, Esq. Barrister at Law.

A work on Medical Jurisprudence, from gentlemen of such acknowledged talents in both professions, will, no doubt, have great advantages: to which will be added, the most valuable part of the work on Medical Jurisprudence, edited by Judge Cooper, embracing additional matter. If possible, the American edition will be comprised in two volumes, octavo.

THE RUDIMENTS OF CHEMISTRY,

Illustrated by Experiments and Copperplate Engravings of chemical apparatus. By Samuel Parkes, F.L.S. F.S.A. Edinburgh, and member of numerous literary societies. The third edition, carefully corrected, and adapted to the present state of Chemical Science.

AN ELEMENTARY SUMMARY OF PHYSIOLOGY,

BY F. MAGENDIE.

A second edition, of a COURSE OF EXAMINATIONS on ANATOMY, and Physiology, Surgery, Chemistry, Materia Medica, Midwifery, and the Practice of Medicine, adapted to the Medical Schools in the United States. By David Condie, M.D.

N. B. A general assortment of medical books are kept for sale, at the publication office of the American Medical Recorder, No. 24 South Eighth-street, Philadelphia. Medical books (to order) imported from Europe at the shortest notice.

GENUINE RED, PALE, AND YELLOW BARKS.

Within a few years, an immense quantity of an inferior and spurious Bark has been brought into the United States, and having, for some time past, observed the pernicious effects that prevail in substituting the spurious for the genuine kind, by which not only the health of the patient, but the reputation of the physician is greatly endangered, I was induced some time since to make an arrangement with a gentleman in South America, for a regular supply of that valuable article, the Peruvian Bark. I have now the pleasure to inform my friends and the public, that I have received a few cases in a genuine state; and as it is believed to be of a very superior quality, it will be carefully put up in sealed papers, and to prevent mistakes, signed by me, and constantly kept for sale, Wholesale and Retail, at my Drug and Chemical Store, No. 294, Market-street, Philadelphia.

ALSO,

THE ESSENTIAL SALT OF BARK.

This article contains, in a small bulk, the volatile and active properties of the Bark, in a high degree of perfection.

SULPHATE OF QUININE,

A new preparation of Bark, and highly recommended by the French physicians in intermittent fever.

CROTON OIL.

A singularly powerful purgative, *one drop being a full dose*, and frequently less is sufficient.

This medicine has been received direct from Blacktown Dispensary, Ma

dras, the only place where it is manufactured, and warranted unadulterated. It has been tried with success in this city, and found of superior strength to that imported from London.

As all of this article, brought direct from Madras to this country, was originally received by me, to prevent mistake, each bottle bears my seal and signature. It is particularly recommended to the attention of professional men.

Iodine, Punica Granatum, Secale Cornutum, Prussic Acid, Pyroligneous Acid, (very fresh and strong,) Colchicum (seeds,) Colchicum (roots,) Colchicum Wine, made at Apothecaries' Hall, London, Barry's Extract of Bark, Ex. Helleb. nig. Ex. Belladonna, Ex. Hyoscyamus, Ex. Cicutæ, Ex. Taraxicon. The above extracts made at Apothecaries' Hall, London. Fucus Helminthocorton, Krameria Triandria, Croton Tiglium, (seeds,) Crystallised Acid of Lemon, Oxalic Acid, Soda Powders, Seidlitz Powders.

AN ASSORTMENT OF

FRESH MEDICINAL PLANTS,

Indigenous and Exotic, constantly on hand; and all other new and popular articles, with a general assortment of fresh *Drugs* and *Medicines*, wholesale and retail, for sale, by

CHARLES MARSHALL, JUN.

At his Drug and Chemical Store, 294, Market-street, Philadelphia.

N. B. The public are respectfully informed, that every Drug and Chemical preparation sold as above, is warranted free from adulteration.

SOLOMON TEMPLE,

Wholesale Druggist, No. 2, North Fourth-street, second door from Yohe's hotel, Philadelphia,

Has a constant supply of unadulterated *Drugs* and *Medicines*, with which he can furnish physicians and country merchants, upon as low terms as articles of similar quality can be procured in this city. Being almost exclusively confined to the wholesale business, and more particularly to supplying physicians at a distance, he is enabled to execute orders with due despatch, and in such a manner as, he hopes, is calculated to give entire satisfaction. Particular attention is given to the mode of packing, both as it regards neatness and perfect security, if carried to any part of the Union.

In addition to his very general stock of officinal medicines, he has facilities for procuring most of the substances composing our domestic *Materia Medica*, as well as many other articles not usually kept in the shops. Of those medicines which vary in quality, as *Ipecac. Peruv. Bark*, &c. care is taken to keep a full supply of the best kinds that can be procured. He can furnish the various chemical preparations at any time, in a state of purity. Every attention which is calculated to afford satisfaction to the purchaser, will be given to the orders of medical practitioners, and the usual credits will be allowed, upon giving satisfactory reference.

UNIVERSITY OF THE STATE OF NEW-YORK.

COLLEGE OF PHYSICIANS AND SURGEONS.

City of New-York, May 6th, 1823.

The College of Physicians and Surgeons will commence their course of Lectures, for the ensuing winter session, on the first Monday of November next, (the 3d,) at the College in Barclay-street.

Dr. Hosack, on the Theory and Practice of Physic, and Clinical Medicine.

Dr. Macneven, on Chemistry.

Dr. Post, on Anatomy and Physiology.

Dr. Mitchell, on Botany and Materia Medica.

Dr. Mott, on Surgery.

Dr. Francis, on Obstetrics, and the Diseases of Women and Children.

The Board of Trustees deem it proper to make it known, that, in conformity with the ordinances of the Honourable the Regents of the University, every student is required to attend two full courses of all the lectures delivered in this College, before he can be admitted as a candidate for the doctorate; unless said student shall have previously attended lectures in said College, prior to the session of 1822-3, or shall have attended one entire course of lectures delivered in some respectable Medical School or University. The candidate must, also, have studied medicine three years with some respectable practitioner, have arrived at the age of twenty-one years, and it will be expected that he should produce written testimony to that effect.

The Matriculation Ticket is five dollars, the holder of which is entitled to the use of the College Library.

By order of the Board,

WRIGHT POST, M. D. *President*.

JOHN W. FRANCIS, M. D. *Registrar*.

MEDICAL AND CHIRURGICAL FACULTY OF BALTIMORE.

At the late general convention of the Faculty, held in this city on Monday the 2d inst. the following resolution was unanimously adopted, and ordered to be published.

"The Medical and Chirurgical Faculty of Maryland, deeply regretting the loss to their body, and to society, by the death of the late **Dr. John Coulter**, wish, thus publicly, to express their high respect for the virtues and professional talents of their lamented brother, and their deep sorrow for his death."

By order,

GEORGE FRICK, *Secretary*.

June 7, 1823.

MEDICAL AND CHIRURGICAL FACULTY OF MARYLAND.

At the late convention of the Medical and Chirurgical Faculty of Maryland, held at the University buildings, on Monday the 2d inst. the following gentlemen were elected officers for the ensuing year:

Dr. Robert More, President.

George Frick, Recording Secretary.

John Buckler, Corresponding Secretary.

William W. Handy, Treasurer.

Ezra Gillingham, Orator.

Examiners for the Western Shore of Maryland.—**Wm. W. Handy**, **Samuel K. Jennings**, Sen., **John Buckler**, **P. Macauley**, **George Frick**, **Wm. Donaldson**, **Ezra Gillingham**.

Examiners for the Eastern Shore.—**Robert Goldsborough**, **Ennalls Martin**, **Tristram Thomas**, **Jas. M. Anderson**, **Handy Irwing**.

Censors for the City of Baltimore.—For the 1st Ward, **Samuel B. Martin**; 2d, **J. B. Whitridge**; 3d, **D. M. Reese**; 4th, **John B. Taylor**; 5th, **Michael Diffenderffer**; 6th, **John D. Readell**; 7th, **John Buckler**; 8th, **Michael Baer**; 9th, **John Revere**; 10th, **Ezra Gillingham**; 11th, **Wm. W. Handy**; 12th, **John Sinnott**.

For the City of Annapolis.—Doctors **John Ridgely**, **Dennis Claude**.

For Fredericktown.—Wm. B. Tyler, Jacob Baer.
Chestertown.—T. V. Weisanthal.
Hartford County.—Wm. Dallam, R. H. Archer.
Cecil County.—James Scanlon, Robert Allen.
Kent County.—Morgan Brown, Edward Scott.
Worcester County.—William Selby, John Martin.
Somerset County.—M. Jones, R. J. King.
Dorchester County.—Wm. Jackson, G. W. Pratt.
Baltimore County.—Augustus Taney, John Mace.
Anne Arundel County.—Joel Hopkins, Jona. Waters.
Calvert County.—John Dare, Thomas Parran.
St. Mary's County.—Joseph Stone, John Gwynn.
Charles County.—John M'Pherson, Jos. Lancaster.
Prince George County.—B. J. Semmes, Turner Wooton.
Montgomery County.—John Wooton, W. P. Palmer.
Frederick County.—John W. Dorsey, Wm. Zollickoffer.
Washington County.—John Ridout, Wm. Hammond.
Alleghany County.—Jno. W. Lawrence, S. P. Smith.

The following gentlemen have been admitted members of the Medical and Chirurgical Faculty, since the 4th June, 1822.

H. L. Hawkins, — Mathews, James Brotherton, Wm. B. Wilson, Henry A. Stinneke, Lennox Birkhead, John K. B. Emory, Robert Wright, Lewis Griffith, John Mackenzie, Richard G. Belt, Henry Culver, Stevens Gambril, John P. Cockey, Edward Veazey, Richard Stewart, — Shuman, Samuel Annan, Thomas Sim, Wm. Van Lear, Ebenezer B. Hebbard, — Beatty, Charles M'Gill, William Sands, Samuel J. Gregory, Wm. Mosher, Jesse P. Warfield, Abraham Jessop, J. J. Cohen, Wm. Williams, Joseph Tanner, Joseph Martin, Zadock H. Rosse, Henry W. Webster, Robert Allen, Thomas Hammond.

June 16.

GEORGE FRICK, *Secretary.*

TRANSYLVANIA UNIVERSITY.

The Catalogue of this flourishing institution, for the present year, is just published. The following synopsis of it may be gratifying to the community.

| | | | | | | |
|---------------------------|---|---|---|---|---|-----|
| Officers of Instruction, | - | - | - | - | - | 15 |
| Law Students, | - | - | - | - | - | 44 |
| Medical Students, | - | - | - | - | - | 170 |
| Under Graduates, | - | - | - | - | - | 121 |
| Preparatory Department, | - | - | - | - | - | 51 |
| Whole number of Students, | - | - | - | - | - | 386 |

There has been a continued increase of students in this University from the period of its new organization in 1818. In November of that year, there were about sixty pupils in the establishment, and at the close of the session in July, about 180. Since that date, the comparison of the printed catalogues, which we now give, will show the advancing importance of this seat of western literature and science.

| | Catalogue of 1820 | 1821 | 1822 | 1823 |
|--|-------------------|------|------|------|
| Whole number of Students, | 235 | 282 | 383 | 386 |
| From other states, | — | 44 | 74 | 106 |
| Number of states on each Catalogue, | — | 9 | 14 | 16 |
| Regulars in the four classes of under graduates, | 53 | 68 | 83 | 86 |
| Graduates in the degree of A. B. | 7 | 19 | 27 | — |
| Candidates for this degree, | — | — | — | 33 |
| Law Class, | — | 9 | 40 | 44 |
| Medical Class, | 34 | 93 | 138 | 170 |
| Medical Graduates, | 8 | 14 | 36 | 48 |

The circle of studies required, has been also enlarged gradually, and will continue to be enlarged as the progress of society may render it expedient. The friends of learning and of the best interests of man, will be rejoiced to witness this very flattering condition of our State University. The pecuniary benefits to our commonwealth, great as they truly are, strike our minds much less forcibly than the blessings which flow from Transylvania through the minds of the numerous young gentlemen who are educated there, and who are to be our future guides and ornaments.

UNIVERSITY OF PENNSYLVANIA.

The Committee of the Trustees appointed to distribute the Tickets of gratuitous admission to the course of Medical Lectures which will begin in November next, agreeably to the foundation established by the Medical Faculty, give notice, that applications in writing, under seal, addressed for the above named Committee, to the care of the Secretary of the University of Pennsylvania, may be made at any time before the first Monday of September next.

It is required that each application be accompanied by a respectable testimonial of the good character of the applicant, and of his being in such restricted circumstances as entitle him to the benefit of this foundation. It must also appear that he has attained the age of eighteen years, is possessed of sufficient literary acquirements, and of studious habits.

On the first Monday of September next, the Committee will open and decide on the applications, and immediately give notice to the successful applicants, and return the others their applications and testimonials, their names not to be disclosed by the committee.

BENJAMIN CHEW,
WM. MEREDITH,
JAMES GIBSON,
Committee of the Trustees.

Philadelphia, May 29, 1823.

NOTICE TO CORRESPONDENTS.

The gentleman who forwarded to us an "Essay on the prevailing doctrines of Pathology," will excuse us for not publishing it in its present form. We approve, most decidedly, of his theoretical opinions; but intermixed as they are with personal allusions, they cannot, and ought not to get access to the pages of this Journal. If he will abstain from these, and restrict his observations to the scientific questions embraced in his essay, we shall, with pleasure, give it an insertion in any of our subsequent numbers.

Communications from Drs. McCall, Jameson, Professor Usher Parsons, and Dr. Baskin have been received, and shall appear in the October number of this Journal.

We have also received a translation of an essay, by Dr. Suelto, on the condition of Medicine in Spain after the expulsion of the Arabs. It shall be published in the next number.

The Circular of the Medical School at Boston, came to hand too late for the present number. It shall appear in our next.

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